POLITEKNIK MALAYSIA

KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

POLYCC POLITEKNIK DAN KOLEJ KOMUNITI

DIT DIPLOMA IN INFORMATION TECHNOLOGY

Student Handbook 2024



DEPARTMENT OF INFORMATION & COMMUNICATION TECHNOLOGY

DIT

DIPLOMA IN INFORMATION TECHNOLOGY

Student Handbook

2024

Foreword



Greetings and warm regards,

I am pleased to extend a warm welcome to all new students of the Diploma in Information Technology (DIT) Programme, offered across 15 Polytechnics in Malaysia. As Director of the Curriculum Division at the Department of Polytechnic and Community College Education (JPPKK), it is my honor to be part of an initiative that plays a vital role in shaping the future of Malaysia's digital landscape.

The DIT Programme has been carefully designed to equip you with the knowledge, skills, and competencies necessary to thrive in today's fast-evolving ICT sector. Our curriculum not only focuses on technical expertise but also emphasizes critical thinking, problem-solving, and the ability to adapt to new technological advancements. This will prepare you to become well-rounded professionals capable of meeting the demands of the modern workforce.

At JPPKK, we are committed to delivering a learning experience that goes beyond the classroom. By integrating hands-on experience, industry-relevant projects, and exposure to the latest trends in technology, we ensure that you are ready to face the challenges of the digital era.

To all the students who have chosen the DIT Programme, I extend my sincere gratitude and congratulations. Your decision marks the beginning of an exciting journey, and I encourage you to make the most of the opportunities ahead. With dedication, hard work, and the support of our outstanding faculty, I am confident you will excel and contribute significantly to the ICT industry.

I wish you all the best in your academic and professional endeavors and look forward to witnessing your growth and achievements throughout your time in the programme.

Warm regards,

Dr. Zamzam bin Mohd Walid
Director,
Curriculum Division, JPPKK

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62100 Putrajaya, Malaysia

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DIT: Diploma in Information Technology
Student Handbook
2024

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Vision & Mission



Vision

To be the Premier Industry-led TVET Institution

Mision

01 To provide access to quality and recognised TVET programme

02 To develop industry-led curriculum and enhance graduate readiness through coordinated industry engagement

03 To produce balanced and enterprising graduate through dynamic and sustainable study programme

04 To gain international recognition through collaboration and active participations in TVET community



Programme Synopsis

This Diploma in Information Technology (DIT) study program provides education and training in the field of Computing with a special emphasis on the field of Information Technology. The courses offered are grouped into modules such as Platform Technologies, Computing Foundation, Programming Essentials, Industry-Led modules and Industry Domain Cluster which refer to specific tasks. The courses offered provide opportunities for students to achieve various careers in various ICT sectors. The program also provides students with transferable skills and a variety of skills that allow them to adapt to new technologies. In addition to technical courses, students are also taught English for Digital Technology, Islamic Studies or Moral Education, Co-curriculum, and Inventive Problem Solving to improve their competence in soft skills. Because this program emphasizes self-initiated learning and hands-on competencies, graduates of this program will be ready to face the challenges of the world of computing technology.

Entry Requirements

SPM leavers

- Malaysian
- Posses SPM or equivalent
- PASS Malay Language (*Bahasa Melayu*)
- PASS History (*Sejarah)* (SPM 2013 and above)
- PASS English Language (*Bahasa Inggeris*)
- Obtain THREE (3) credits in the following subjects:
  - Mathematics
  - TWO (2) other subjects
- Candidates are non-disabled members

Other than SPM leavers

- Malaysian
- PASS MQA recognized/Malaysian Skills Certificate (SKM) Level 3 studies in a related field and pass SPM with credits in Mathematics;

  OR

- Possess an APEL (Accreditation of Prior Experiential Learning) Certificate from MQA for admission to the diploma (Level 4) and have work experience in a related field.
- Candidates are non-disabled.

1 Sijil Politeknik Tahap 3, KKM
- Sijil Teknologi Maklumat

2 Sijil Kolej Komuniti Tahap 3, KKM
- Certificate in Industrial Internet of Things
- Sijil Sistem Komputer dan Rangkaian
- Sijil Teknologi Maklumat

3 Sijil Institut Kemahiran Tinggi PERDA Tahap 3, KKM
- Sijil Teknologi Maklumat

4 Sijil Institut Kemahiran MARA Tahap 3, KKM
- Sijil Teknologi Kejuruteraan Komputer

5 Sijil Kemahiran Malaysia Tahap 3, KKM
- Juruteknik Rangkaian Komputer (D-050-3)
- Juruteknik Rangkaian Komputer (D-051-3)
- Juruteknik Rangkaian Komputer (IT-030-3)
- Juruteknik Sistem Komputer (D-040-3)
- Juruteknik Sistem Komputer (D-041-3)
- Operasi Sistem Komputer (IT-020-3:2013:)
- Pembangunan Aplikasi [IT-010-3:2016]
- Pembangunan Aplikasi-Pengaturcara Utama (IT-010-3)
- Perkhidmatan Rangkaian Komputer (IT-030-3:2013:)
- Sokongan & Penyelenggaraan IT (IT-035-4:2014)

If the certificate is not in the above list, please contact Unit Ambilan Pelajar, Bahagian Ambilan dan Pembangunan Pelajar, JPPKK
Sources from Portal Pengambilan Pelajar Politeknik & Kolej Komuniti

Job Prospects

ICT manpower demand is expected to have a strong growth recently based on the research done by Malaysia Digital Economy Corporation (MDEC). The rapid development in ICT has raised the demand for qualified IT graduates that meet the industry needs and requirements for both locally and globally. Thus, graduates from this programme are equipped with the knowledge, skills, attitude and abilities that can be applied to a broad range of careers in the ICT industrial worlds and businesses. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market such as:

- Computer Application Programmer
- Internet Programmer
- Web Programmer
- Database Programmer
- System Analysts Assistant
- Software Developer
- Database Administrator
- Software Tester
- System Support Personnel
- Systems Programmer
- Network Support Personnel
- Network Administrator
- IT Supporting Engineer
- Assistant Network Engineer
- Technical Helpdesk / Support







PAI, PEO & PLO

Program Aims (PAI)

- The programme believes that every individual has potential to foster adaptable and responsible Information and Communication Technology (ICT) Assistant with new technological advancement in supporting the national digital initiative transformation agenda.

Program Educational Objectives (PEO)

PEO 1 : Computer technicians have basic knowledge with numeracy and technical skill to solve well-defined and routine problems in computing in line with the industry requirements

PEO 2 : Computer technicians have the supervisory ability and good interpersonal and communication skills to interact in various environments

PEO 3 : Computer technicians have a commitment to lifelong learning and an entrepreneurial mindset for self and career development

PEO 4 : Computer technicians who are committed to ethical conduct and professional practices in the organization and society

Program Learning Outcomes (PLO)

PLO 1: Explain concepts, principles and theories relating to Information Technology

PLO 2: Apply design and architecture to Information Technology solutions using appropriate tools and techniques

PLO 3: Perform support and development tasks on Information Technology solutions related to job functions

PLO 4: Demonstrate effective interaction with stakeholders and society in a work-related environment

PLO 5: Exhibit effective communication with stakeholders and society in a work-related environment

PLO 6: Use appropriate digital tools on computing related to job functions

PLO 7: Apply appropriate numerical skills in computing related to job functions

PLO 8: Demonstrate supervisory skills and responsibility in executing instructions related to job functions

PLO 9: Commit to principles of lifelong learning in academic and career development

PLO 10: Demonstrate an entrepreneurial mindset in performing tasks

PLO 11: Commit to professional and ethical practices in executing instructions related to the job and organizational functions

MATRIX OF PLO VS PEO

PROGRAMME LEARNING OUTCOME (PLO)		PROGRAMME EDUCATIONAL OBJECTIVE (PEO)			
		PEO 1	PEO 2	PEO 3	PEO 4
PLO 1	Explain concepts, principles and theories relating to Information Technology	/			
PLO 2	Apply design and architecture to Information Technology solutions using appropriate tools and techniques.	/			
PLO 3	Perform support and development tasks on Information Technology solutions related to job functions	/			
PLO 4	Demonstrate effective interaction with stakeholders and society in a work-related environment.		/		
PLO 5	Exhibit effective communication with stakeholders and society in a work-related environment		/		
PLO 6	Use appropriate digital tools on computing related to job functions	/			
PLO 7	Apply appropriate numerical skills in computing related to job functions	/			
PLO 8	Demonstrate supervisory skills and responsibility in executing instructions related to job functions		/		
PLO 9	Commit to principles of lifelong learning in academic and career development			/	
PLO 10	Demonstrate an entrepreneurial mindset in performing tasks			/	
PLO 11	Commit to professional and ethical practices in executing instructions related to the job and organisational functions				/

Programme Structure

2.5 Years Arrangement (Session I Intake)

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 1						
Compulsory	MPU23162	Pengajian Islam*	1	0	2	2
	MPU23272	Pendidikan Moral**				
	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	0
Core Computing	DBM10143	Calculus and Algebra	2	0	2	3
	DFC10263	Computer Architecture	2	2	0	3
	DFC10273	Operating Systems	2	2	0	2
Discipline core	DFC10252	Problem Solving and Program Design	2	1	0	2
	DFT10173	Introduction to Computer System	2	2	0	3
TOTAL			**25**			**18**

SEMESTER 2						
Compulsory	MPU22153	English for Digital Technology	2	0	2	3
Core Computing	DBM20153	Discrete Mathematics	2	0	2	3
	DFC20283	Database Fundamentals	2	2	0	3
	DFC20293	Network and Data Communication	2	3	0	3
	DFC20303	Programming Fundamentals	2	2	0	3
Discipline core	DFN30472	Introduction to Cloud Computing	2	1	0	2
TOTAL			**24**			**17**

Programme Structure

2.5 Years Arrangement (Session I Intake)

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 3 (SHORT SEMESTER)						
Compulsory	MPU24031	Sukan 1	0	2	0	1
	MPU24041	Kelab/Persatuan 1				
	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	0
Core Computing	DFC30333	Ethics in Computing	2	3	0	3
Discipline core	DFT30183	Cyberpreneurship	2	3	0	3
		TRACK : SUBJECT 1				3
TOTAL						**10**

SEMESTER 4						
Compulsory	MPU22071	Kursus Integriti dan Anti Rasuah (KIAR)	0	0	2	1
Core Computing	DFC30323	Statistics and Probability	2	2	0	3
	DFC20313	Cybersecurity Fundamentals	2	3	0	3
Discipline core	DFN30472	TRACK : SUBJECT 2	2	1	0	3
		TRACK : SUBJECT 3				3
		TRACK : SUBJECT 4				3
		TRACK : SUBJECT 6 FREE ELECTIVE : SUBJECT 6 ***				3
TOTAL						18

Programme Structure

2.5 Years Arrangement (Session I Intake)

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 5						
Core Computing	DFC40343	System Analysis and Design Fundamentals	2	2	0	3
Discipline core		TRACK : SUBJECT 5				3
		TRACK : SUBJECT 7 / FREE ELECTIVE : SUBJECT 7 ***				3
		TRACK : SUBJECT 8				3
		TRACK : SUBJECT 9				3
		TRACK : SUBJECT 10				3
TOTAL						**18**
SEMESTER 6 (SHORT SEMESTER)						
Compulsory	MPU24051	Sukan 2	0	2	0	1
	MPU24061	Kelab/Persatuan 2				
Project		PROJECT				4
TOTAL			**2**			**5**
SEMESTER 7						
Industrial Training	DUT60019	Industrial Training	0	0	0	9
TOTAL			**0**			**9**
TOTAL CREDIT VALUE						**95**

Programme Structure

2.5 Years Arrangement (Session II Intake)

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 1						
Compulsory	MPU23162	Pengajian Islam*	1	0	2	2
	MPU23272	Pendidikan Moral**				
	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	2
Core Computing	DBM10143	Calculus and Algebra	2	0	2	3
	DFC10263	Computer Architecture	2	2	0	3
	DFC10273	Operating Systems	2	2	0	2
Discipline core	DFC10252	Problem Solving and Program Design	2	1	0	2
	DFT10173	Introduction to Computer System	2	2	0	3
TOTAL			**25**			**17**

SEMESTER 2 (SHORT SEMESTER)						
Compulsory	MPU24031	Sukan 1	0	2	0	1
	MPU24041	Kelab/Persatuan 1				
Core Computing	DFC30333	Ethics in Computing	2	3	0	3
	DFC20293	Network and Data Communication	2	3	0	3
Discipline core	DFT30183	Cyberpreneurship	2	3	0	3
TOTAL			**17**			**10**

Programme Structure

2.5 Years Arrangement (Session II Intake)

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 3						
Core Computing	DBM20153	Discrete Mathematics	2	0	2	3
	DFC20283	Database Fundamentals	2	2	0	3
	DFC30323	Statistics and Probability	2	2	0	3
	DFC20303	Programming Fundamentals	2	2	0	3
Discipline core	DFN30472	Introduction to Cloud Computing	2	1	0	2
		TRACK : SUBJECT 1				3
TOTAL						**17**

SEMESTER 4						
Core Computing	DFC40343	System Analysis and Design Fundamentals	2	2	0	3
	DFC20313	Cybersecurity Fundamentals	2	3	0	3
Discipline core		TRACK : SUBJECT 2				3
		TRACK : SUBJECT 3				3
		TRACK : SUBJECT 4				3
		TRACK : SUBJECT 5				3
TOTAL						**18**

Programme Structure

2.5 Years Arrangement (Session II Intake)

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 5 (SHORT SEMESTER)						
Compulsory	MPU22153	English for Digital Technology	2	0	2	3
	MPU24051	Sukan 2	0	2	0	1
	MPU24061	Kelab/Persatuan 2				
Discipline core		TRACK : SUBJECT 6 / FREE ELECTIVE : SUBJECT 6 ***				2
TOTAL						**6**
SEMESTER 6						
Compulsory	MPU22071	Kursus Integriti dan Anti Rasuah (KIAR)	0	0	2	1
Discipline core		TRACK : SUBJECT 7 / FREE ELECTIVE : SUBJECT 7 ***				3
		TRACK : SUBJECT 8				3
		TRACK : SUBJECT 9				3
		TRACK : SUBJECT 10				3
Project		PROJECT				4
TOTAL						**17**
SEMESTER 7						
Industrial Training	DUT60019	Industrial Training	0	0	0	9
TOTAL			**0**			**9**
TOTAL CREDIT VALUE						**95**

Programme Structure

3.0 Years Arrangement

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 1						
Compulsory	MPU24031	Sukan 1	0	2	0	1
	MPU24041	Kelab/Persatuan 1				
	MPU24XX1	Unit Beruniform 1				
	MPU22153	English for Digital Technology	2	0	2	3
Core Computing	DBM10143	Calculus and Algebra	2	0	2	3
	DFC10263	Computer Architecture	2	2	0	3
	DFC10273	Operating Systems	2	2	0	3
Discipline core	DFC10252	Problem Solving and Program Design	2	1	0	2
	DFT10173	Introduction to Computer System	2	2	0	3
TOTAL			25			**18**

SEMESTER 2						
Compulsory	MPU23162	Pengajian Islam*	1	0	2	2
	MPU23272	Pendidikan Moral**				
	MPU24051	Sukan 2	0	2	0	1
	MPU24061	Kelab/Persatuan 2				
	MPU24XX1	Unit Beruniform 2				
Core Computing	DBM20153	Discrete Mathematics	2	0	2	3
	DFC20283	Database Fundamentals	2	2	0	3
	DFC20293	Network and Data Communication	2	3	0	3
	DFC20303	Programming Fundamentals	2	2	0	3
	DFC20313	Cybersecurity Fundamentals	2	3	0	3
TOTAL			**27**			**18**

Programme Structure

3.0 Years Arrangement

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 3						
Compulsory	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	2
Core Computing	DFC30323	Statistics and Probability	2	2	0	3
	DFC30333	Ethics in Computing	2	3	0	3
Discipline core	DFT30183	Cyberpreneurship	2	3	0	3
	DFN30472	Introduction to Cloud Computing	2	1	0	2
		TRACK : SUBJECT 1				3
		TRACK : SUBJECT 2				3
TOTAL						**19**

SEMESTER 4						
Core Computing	DFC40343	System Analysis and Design Fundamentals	2	2	0	3
Discipline core		TRACK : SUBJECT 3				3
		TRACK : SUBJECT 4				3
		TRACK : SUBJECT 5				3
		TRACK : SUBJECT 6 / FREE ELECTIVE : SUBJECT 6 ***				2
		TRACK : SUBJECT 7 / FREE ELECTIVE : SUBJECT 7 ***				3
TOTAL						17

Programme Structure

3.0 Years Arrangement

COMPONENTS	COURSE CODE	COURSE NAME	CONTACT HOURS			CREDIT HOURS
SEMESTER 5						
Compulsory	MPU22071	Kursus Integriti dan Anti Rasuah (KIAR)	0	0	2	1
Discipline core		TRACK : SUBJECT 8				3
		TRACK : SUBJECT 9				3
		TRACK : SUBJECT 10				3
Project		PROJECT				4
TOTAL						**14**

SEMESTER 6						
Industrial Training	DUT60019	Industrial Training	0	0	0	9
TOTAL			**0**			**9**
TOTAL CREDIT VALUE						**95**

Track Information

01



SAD — Software and Application Development

This track focuses on equipping students with skills to design, develop, and maintain software applications. It covers object-oriented programming, mobile app development, and full-stack web development, enabling students to create efficient and scalable software solutions.

02



NS — Networking System

The Networking Systems track equips students with a comprehensive set of skills in planning, designing, implementing, administering, securing, and managing network infrastructure. Core areas of focus include switching and routing essentials, network security protocols and enterprise networking. Graduates are prepared to excel in networking environments that meet industry standards.

03



IS — Information Security

This track emphasizes protecting information systems from security breaches and threats. Students learn about ethical hacking, malware analysis, digital forensics, and incident response handling. Graduates are prepared for roles such as cybersecurity analysts, penetration testers, and digital forensic specialists.

04



GAME — Digital Game Programming

This track offers specialized training in game design, development, and programming. Students are taught interactive 2D/3D programming, mobile game development, and augmented reality, providing the necessary skills to develop engaging and innovative games.

05



WEB — Web Development

Web Development track offers students to be trained in building dynamic, responsive websites and web applications. Key areas of study include web design technologies, PHP programming and web security to ensure students can develop secure and functional websites.

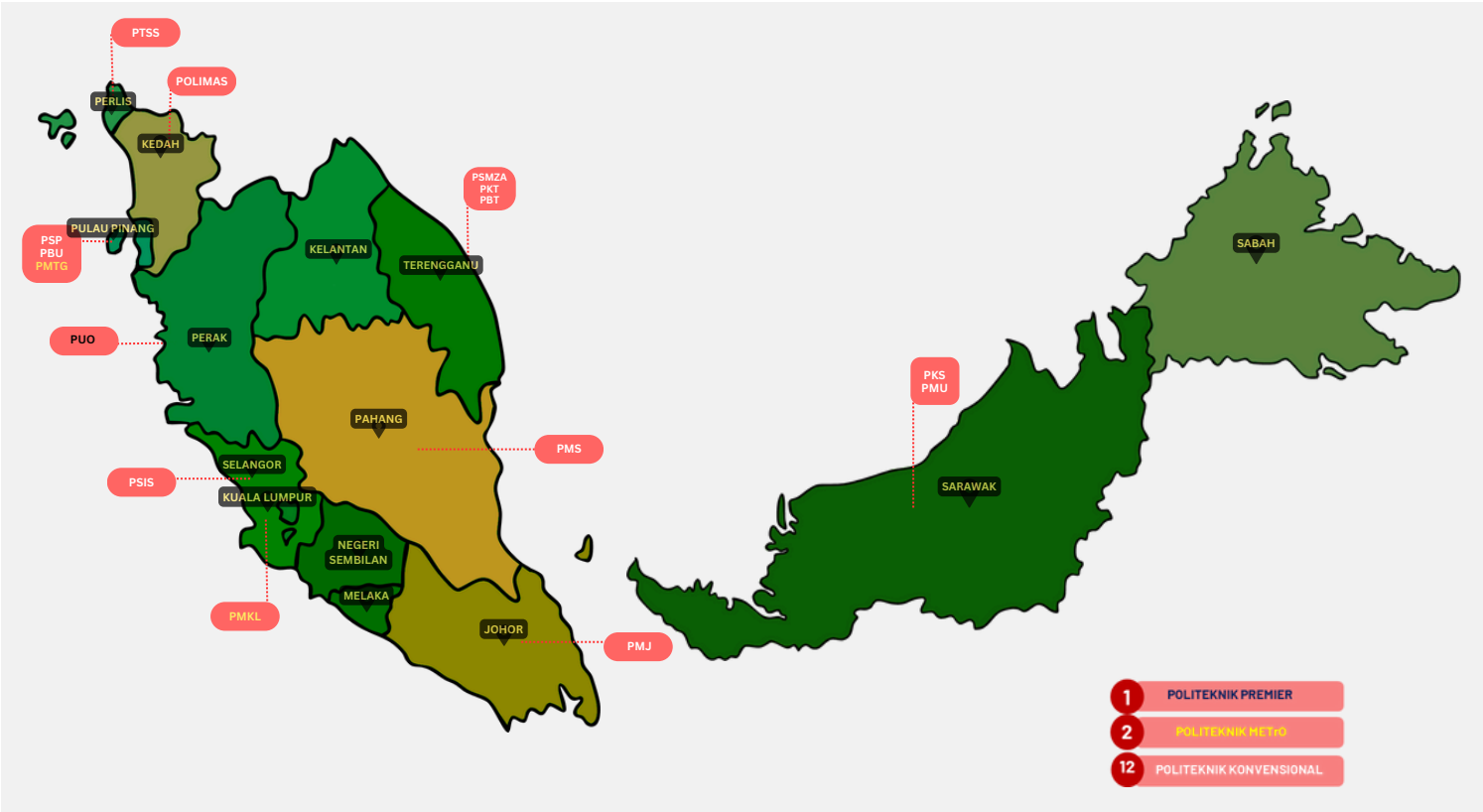
06



DATA — Data Management & Visualization

This track offers hands-on experience with modern tools to manage, analyze, and visualize data. It includes mastering database management, discovering patterns through data mining, and using machine learning to extract insights from large datasets, preparing you for impactful, data-driven careers in today's digital world.

POLYTECHNICS WITH DIT PROGRAMME



- Politeknik Ungku Omar (PUO)
- Politeknik Sultan Abdul Halim Mu'Adzam Shah (POLIMAS)
- Politeknik Kuching Sarawak (PKS)
- Politeknik Seberang Perai (PSP)
- Politeknik Kuala Terengganu (PKT)
- Politeknik Sultan Mizan Zainal Abidin (PSMZA)
- Politeknik Sultan Idris Shah (PSIS)
- Politeknik Tuanku Syed Sirajuddin (PTSS)
- Politeknik Muadzam Shah (PMS)
- Politeknik Mukah Sarawak (PMU)
- Politeknik Balik Pulau (PBU)
- Politeknik Mersing (PMJ)
- Politeknik Metro Kuala Lumpur (PMKL)
- Politeknik Metro Tasek Gelugor (PMTG)
- Politeknik Besut Terengganu (PBT)

TRACKS AND POLYTECHNICS

SAD
Software & Application Development

Politeknik Ungku Omar
Politeknik Tuanku Syed Sirajuddin
Politeknik Sultan Abdul Halim Muadzam Shah
Politeknik Seberang Perai
Politeknik Balik Pulau
Politeknik Sultan Idris Shah
Politeknik Mersing
Politeknik Muadzam Shah
Politeknik Sultan Mizan Zainal Abidin
Politeknik Kuala Terengganu
Politeknik Kuching
Politeknik Mukah
Politeknik Besut Terengganu

NS
Networking System

Politeknik Ungku Omar
Politeknik Tuanku Syed Sirajuddin
Politeknik Seberang Perai
Politeknik Balik Pulau
Politeknik Sultan Idris Shah
Politeknik Mersing
Politeknik Muadzam Shah
Politeknik Kuala Terengganu
Politeknik Kuching
Politeknik Mukah

IS
Information Security

Politeknik Ungku Omar
Politeknik Mersing
Politeknik METrO Tasek Gelugor

TRACKS AND POLYTECHNICS

GAME

Digital Game Programming

Politeknik MeTrO Kuala Lumpur

WEB

Web Development

Politeknik Sultan Abdul Halim Muadzam Shah
Politeknik Sultan Mizan Zainal Abidin

DATA

Data Management & Visualization

Politeknik Seberang Perai
Politeknik Besut Terengganu

Synopsis & Course Learning Outcomes

CORE
Core Computing

01 DFC10263 COMPUTER ARCHITECTURE

Synopsis

COMPUTER ARCHITECTURE is an introduction to overall of a computer system, computer systems organization, low level programming and the hardware/ software interfaces. The organisation of the components in the computer architecture which make up a computer system and the meaning of the operations which guide its function. It defines what is seen on the machine interface, which is targeted by programming languages and their compilers. It is the basic computer machinery skills needed to progress to the next level of computer system. Continuation of foundational knowledge in computer system and technology which is a part of the requirement in the body of knowledge in Information Technology field.

Course Learning Outcome

CLO 1 : Explain the relationships between hardware components and the subsystems used in a computer system effectively. (C2, PLO1)

CLO2 : Discuss collaboratively the problem of computer architecture using appropriate operating system, computer network, and assembly language. (A2, PLO4)

02 DFC10273 OPERATING SYSTEM

Course Learning Outcome

CLO 1 : Explain the environment, process, techniques and technologies in operating system. (C2, PLO1)

CLO2 : Practice effective communication with peers in managing operating system. (A3, PLO5)

Synopsis

OPERATING SYSTEM introduces system software that manages computer hardware, software resources, and provides services for computer programs. This course will cover briefly the evolution and major components of operating system. It emphasis based on four major subsystems; memory management, processes management, file systems and mobile devices operating system to run applications and programs.

CORE Synopsis & Course Learning Outcomes

Core Computing

03 DFC20283 DATABASE FUNDAMENTALS

Synopsis

DATABASE FUNDAMENTALS course engages students to apply business scenarios and create a data model - a conceptual representation of an organization's information. Students implement their database design by creating a physical database using SQL (Structured Query Language). Basic SQL syntax and the rules for constructing valid SQL statements are reviewed. This course culminates with a mini project that challenges students to design, implement, and demonstrate a database solution for a business or organization.

Course Learning Outcome

CLO 1 : Apply fundamental of Database Management System (DBMS), relational data model and normalization concepts in database development process.(C3, PLO2)

CLO2 : Show a well-structured database using the database query to manipulate a database with an appropriate commercial Database Management System (DBMS) in solving an organization's requirements. (P3, PLO3)

Course Learning Outcome

CLO 1 : Explain the basic communication principles and protocols of a computer network. (C2, PLO1)

CLO2 : Builds small network with an appropriate network devices for a given situation. (P3, PLO3)

CLO 3 : Demonstrate leadership and responsibilities skills in applying sustainable practices to implement basic network configuration. (A3, PLO8)

04 DFC20293 NETWORK AND DATA COMMUNICATION

Synopsis

NETWORK AND DATA COMMUNICATION introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. This course also explains the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Students will be able to design simple Local Area Networks (LAN), perform basic configurations for routers and switches, troubleshoot connectivity issue and implement IP addressing schemes.

Synopsis & Course Learning Outcomes

CORE
Core Computing

05 DFC20303 PROGRAMMING FUNDAMENTALS

Synopsis

PROGRAMMING FUNDAMENTALS course introduces the fundamental concepts of structured programming and provides a comprehensive introduction to programming for Information Technology majors. Topics include data types, control structures, pointer, structure, functions, arrays and the mechanics of running, testing and debugging. Practical lab sessions will help to develop the skills required to identify the best data and program constructs to solve well-defined problems.

Course Learning Outcome

CLO 1 : Apply programming elements and articulate how they are used to achieve a working program. (C3, PLO2)

CLO2 : Demonstrate appropriate algorithm based on well-defined problem using C++ programming language. (P3, PLO3)

06 DFC20313 CYBERSECURITY FUNDAMENTALS

Course Learning Outcome

CLO 1 : Explain cybersecurity threats and hazard using appropriate tools and techniques for secured environment in organizations. (C3, PLO2)

CLO2 : Perform a proper techniques and procedures to mitigate security issues. (A2, PLO9)

CLO 3 : Practice professional codes of ethics to adapt the real challenges in security environment. (A3, PLO11)

Synopsis

CYBERSECURITY FUNDAMENTALS course introduces students to the current cybersecurity threats and hazards. This course provides students with a foundational understanding of information security theory, basic principles, and techniques for designing secure systems. Students will explore principles and best practices in environmentally sustainable secure computing and learn to utilize appropriate tools and technologies for managing information system environments.

CORE
Core Computing

Synopsis & Course Learning Outcomes

07 DFC30323 STATISTICS AND PROBABILITY

Synopsis

STATISTICS AND PROBABILITY course introduces students to basic statistical concepts such as organizing data, numerical descriptive measures, probability and its applications, probability distributions, sampling, estimation and hypothesis testing. This course involves techniques to summarize and make sense of data, often using measures like mean, median, and standard deviation. Students will also explore the foundation to utilize appropriate statistical tools and probability models for decision-making.

Course Learning Outcome

CLO 1 : Apply basic concepts of statistical and probability methods to solve statistical problems. (C3, PLO2)

CLO2 : Construct data analysis using appropriate statistical methods to estimate mean, proportion and standard deviation. (P2, PLO3)

CLO 3 : Build a hypothesis testing to make accurate decisions based on the given samples. (P3, PLO7)

08 DFC30333 ETHICS IN COMPUTING

Course Learning Outcome

CLO 1 : Explain philosophical bases for computer ethics and social issues in computing. (C3, PLO2)

CLO2 : Perform good leadership and management skills in various issues related to ethics when working with computers and the internet. (A2, PLO8)

CLO 3 : Practice professional codes of ethics in facing challenges on the impact and control of computer technology. (A2, PLO11)

Synopsis

ETHICS IN COMPUTING course provides students with the knowledge of philosophical bases for computer ethics and social issues. This course explains the reliability and safety of computer systems, protecting software and other intellectual property. The course describes privacy and information issues and strategies on the impact and control of computer technology. Upon completion, students should be able to apply professional codes of ethics.

Synopsis & Course Learning Outcomes

CORE
Core Computing

09 DFC40343 SYSTEM ANALYSIS AND DESIGN FUNDAMENTALS

Synopsis

SYSTEM ANALYSIS AND DESIGN FUNDAMENTALS course is an introduction to the concept and the development of information system. The course is designed to acquire the knowledge of system development life cycle. It covers all activities in planning, analyzing, designing and developing information systems including techniques used in software maintenance. Systems analysis is the process of turning a set of user requirements into a logical system specification. Systems design takes the logical specification and converts it into a set of designs that can then be implemented to create a working application. It includes expanded coverage of data flow diagrams, data dictionary, and process specifications.

Course Learning Outcome

CLO 1 : Implement the appropriate model, tools and techniques concept of System Analysis and Design for project development. (C3, PLO2)

CLO2 : Prepare the appropriate key deliverable's of each phase in System Development Life Cycle (SDLC) activities. (P3, PLO3)

CLO3 : Perform a good personal skills with peers in proposing a project development. (A3, PLO9)

CORE
Discipline Core

Synopsis & Course Learning Outcomes

01 DFC10252 PROBLEM SOLVING AND PROGRAM DESIGN

Synopsis

SWITCHING ESSENTIALS course introduces students to the equipment, applications, and protocols in a small, switched networks. The course provides knowledge on Inter-VLAN dynamic routing protocols which includes VLSM, VLANs and Dynamic Trunking Protocol (DTP). Students also learn about the Spanning Tree Protocol and link aggregation concepts through the introduction of EtherChannel. Students' skills are developed through hands on exercises in the laboratory on configuration, installation and troubleshooting a network.

Course Learning Outcome

CLO 1 : Explain the fundamentals of computer programming languages in several scenarios. (C2, PLO1)

CLO2 : Demonstrate effective communication skills to solve problem using different types of programming tools for the given scenarios. (A3, PLO5)

02 DFT10173 INTRODUCTION TO COMPUTER SYSTEM

Course Learning Outcome

CLO 1 : Classify the hardware devices on personal computer and mobile devices related to current information technologies. (C2, PLO1)

CLO2 : Construct personal computer assembly process, maintenance and troubleshooting that comply with computing standard procedure. (P3, PLO3)

Synopsis

INTRODUCTION TO COMPUTER SYSTEM introduces students to the hardware, software and fundamental of Information Technology (IT) knowledge and skills necessary for ICT professionals. This course covers the study of personal computer (PC) and mobile devices hardware including PC and mobile devices assembly, installing and connecting peripherals. Student will learn hardware troubleshooting techniques to identify and rectify computer faults using appropriate devices.

Synopsis & Course Learning Outcomes

CORE
Discipline Core

03 DFT30183 CYBERPRENEURSHIP

Synopsis

CYBERPRENEURSHIP course provides a broad overview of the role of entrepreneurial thinking and innovation in advancing IT-focused businesses. This student will examine how these skills can be leveraged to create new IT driven businesses as well as to create competitive advantage for existing businesses via new IT products and services. Students will be introduced to concepts, tools, and principles of business management including business strategy, finance, marketing, human resources, and leadership within the context of IT business models.

Course Learning Outcome

CLO 1 : Build a business idea using appropriate analysis method for effective business plan. (P3, PLO3)

CLO2 : Practice good leadership and management skills in delivering business plan for future expansion. (A2, PLO8)

CLO 3 : Demonstrate entrepreneur skills that related to entrepreneurship activities. (A3, PLO10)

04 DFN30472 INTRODUCTION TO CLOUD COMPUTING

Course Learning Outcome

CLO 1 : Explain basic concepts of cloud computing and the different cloud service categories. (C2, PLO1)

CLO2 : Demonstrate professionalism and ethical skills in the use of cloud computing applications. (A3, PLO11)

Synopsis

INTRODUCTION TO CLOUD COMPUTING provides a foundational understanding of cloud technologies and their applications. The course defines what the cloud is and how it differs from traditional computing models. It explores the underlying infrastructure of cloud computing, cloud services, virtualization, and networking technologies that enable the cloud to function. Students gain insight into cloud security best practices, and risk mitigation strategies to safeguard sensitive data.

awareness and a well-rounded education.

Synopsis & Course Learning Outcomes

Track SAD
Software & Application Development





Synopsis & Course Learning Outcomes

Track SAD
Software & Application Development

TRACK	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PROGRAMME LEARNING OUTCOME (PLO)											PREREQUISITE / CO-REQUISITE
			L	P	T	O		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	
								Knowledge & Understanding	Cognitive Skills	Practical Skills	Interpersonal Skills	Communication Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy & Responsibility	Personal Skills	Entrepreneurial Skills	Ethics & Professionalism	
								CLS1	CLS2	CLS3A	CLS3B	CLS3C	CLS3D	CLS3E	CLS3F	CLS4A	CLS4B	CLS5	
DISCIPLINE CORE COURSES OF SOFTWARE AND APPLICATION DEVELOMENT TRACK																			
SUBJECT 1	DFP30313	Digital Multimedia	1	4	0	0	3			√			√				√		
SUBJECT 2	DFP30323	Object Oriented Programming	2	3	0	0	3	√		√								√	DFC20303
SUBJECT 3	DFP40333	Full Stack Web Development	1	4	0	0	3			√					√		√		DFC20283
SUBJECT 4	DFP40343	Visual Basic Programming	1	4	0	0	3			√	√				√				
SUBJECT 5	DFP40353	Mobile Application Development	1	3	0	0	3			√							√	√	DFP30323
SUBJECT 6	DFP40362	Business Intelligence	1	2	0	0	2		√	√									DFC20283
SUBJECT 7	DFS40283	Server Administration	2	3	0	0	3			√			√					√	
SUBJECT 8	DFP50413	Integrative Programming Technologies	2	3	0	0	3			√	√							√	DFP30323
SUBJECT 9	DFP50393	Python Programming	2	3	0	0	3			√					√			√	DFC20303
SUBJECT 10	DFP50403	Java Web Development	2	3	0	0	3			√		√	√						DFC20283, DFP30323
PROJECT COURSE OF SOFTWARE AND APPLICATION DEVELOMENT TRACK																			
PROJECT	DFT50194	Integrated Project	2	3	0	0	4			√		√			√	√			ALL CORE COMPUTING COURSES
FREE ELECTIVE																			
1	DUD10012	Design Thinking	1	0	0	1	2		√			√							
2	DUG30032	Green Technology Compliance	1	2	0	0	2		√	√		√							

Synopsis & Course Learning Outcomes

Track SAD
Software & Application Development

01 DFP30313 DIGITAL MULTIMEDIA

Synopsis

DIGITAL MULTIMEDIA course covers multimedia concepts and applications utilizing text, graphics, animation, sound, video, and various multimedia applications in the design, development, and creation of multimedia presentations and publications within an interactive environment. Students will explore the use of multimedia tools in designing and authoring interactive digital media

Course Learning Outcome

CLO 1 : Follow various aspects of multimedia development model in relation to appropriate and acceptable design techniques used to produce multimedia products. (P3, PLO3)

CLO 2 : Construct multimedia authoring skills by creating a comprehensive multimedia product using appropriate multimedia tools. (P3, PLO6)

CLO 3 : Demonstrate entrepreneurial and good managerial skills in developing multimedia interactive application.
(A3, PLO10)

02 DFP30323 OBJECT ORIENTED PROGRAMMING

Course Learning Outcome

CLO 1 : Explain the concepts of Object Oriented Programming in application development (C2, PLO1)

CLO 2 : Construct Object Oriented Progamming concept in Java programming (P4, PLO3)

CLO 3 : Follow the professional ethics in group to develop a solution for a given scenario (A3, PLO11)

Synopsis

OBJECT ORIENTED PROGRAMMING (OOP) course introduces students to the principles and concepts behind the paradigm of OOP and features in Java. This course introduces students on how to write, compile and run programs, make effective use of some of the standard packages, write object-oriented code using classes and objects, inheritance, and polymorphism along with the use of exception handling.

Track SAD

Synopsis & Course Learning Outcomes

Software & Application Development

03 DFP40333 FULL STACK WEB DEVELOPMENT

Synopsis

FULL STACK WEB DEVELOPMENT course is designed to equipped students with the essential skills needed to create dynamic, interactive, and responsive websites and web applications. Students will learn the fundamentals of HTML, CSS, JavaScript, MySQL and PHP while harnessing the power of Bootstrap, a popular front-end framework. Throughout the course, they will master the art of crafting modern and visually appealing web interfaces, implementing interactive elements, and seamlessly integrating back-end functionality. By the end of the course, students will have the confidence to design, develop, anddeploy feature-richwebprojects efficiently, making them proficient in the fast-paced world of web development.

Course Learning Outcome

CLO 1 : Integrate PHP and MySQL with Bootstrap to build database-driven web applications projects. (P4, PLO3)

CLO 2 : Demonstrate positive leadership in developing interactive dynamic web application that can be view in web browser. (A3, PLO8)

CLO 3 : Demonstrate entrepreneur skills that related to web application development activities. (A2, PLO10)

04 DFP40343 VISUAL BASIC PROGRAMMING

Course Learning Outcome

CLO 1 : Construct the Visual Basic program by using .NET frameworks in developing windows application (P4, PLO4)

CLO 2 : Integrate effective interpersonal skills with peers in developing windows application (A3, PLO4)

CLO 3 : Demonstrate effective leadership with peer in developing Visual Basic programs

Synopsis

Visual Basic Programming(VB Programming) course provides students with the knowledge and skills needed to develop applications in Microsoft Visual Studio for the IDE platform. The course focuses on Graphical User Interface (GUI), programming structure, language syntax, and integration data base with ADO.NET in VB.NET application development. This course introduces computer programming using the VB Programming language with object-oriented programming principles. Emphasis is on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug and secure coding in Visual Basic program.

Synopsis & Course Learning Outcomes

Track SAD
Software & Application Development

05 DFP40353 MOBILE APPLICATION DEVELOPMENT

Synopsis

MOBILE APPLICATION DEVELOPMENT introduces mobile application development for the Android platform. Android is a software stack for mobile devices that includes an operating system, middleware and key applications. The Android SDK provides the tools and APIs necessary to begin developing applications on the Android platform using the Java or Kotlin programming languages. Students will learn how to create Android applications using Android Studio modules and deploy the developed apps appropriately. Topics will include Android Development Environment, user interfaces, audio, graphics, data persistence, local and remote storage and apps deployment.

Course Learning Outcome

CLO 1 : Construct mobile application components, APIs and libraries by using Android Development Tools (P4, PLO3)

CLO 2 : Demonstrate mobile apps development that able to store local and remote data using data persistence. (A2, PLO10)

CLO 3 : Perform mobile apps publishing and distribution using appropriate procedure (A3, PLO11)

06 DFP40362 BUSINESS INTELLIGENCE

Course Learning Outcome

CLO 1 : Explain the Business Intelligence and fundamental concepts of data manipulation to support decision making (C3, PLO2)

CLO 2 : Build a dashboard report that suits business enterprise to support decision making (P3, PLO3)

Synopsis

BUSINESS INTELLIGENCE course is designed to emphasize the classification of specific technologies for collecting, storing, analyzing and giving the best option for enterprise users to make better decisions. It consists of ETL, data manipulation, data visualization and reporting which are useful to help enterprise users to make a best decision for their business.

Track SAD

Software & Application Development

Synopsis & Course Learning Outcomes

07 DFS40283 SERVER ADMINISTRATION

Synopsis

SERVER ADMINSTRATION course is designed to provide a comprehensive understanding of both Linux and Windows server operating systems. Throughout this course, students will gain hands-on experience and practical knowledge in administering, configuring, and maintaining Linux and Windows Server. The course aims to develop a solid foundation in server administration skills, ensuring that learners can effectively manage a wide range of server environments.

Course Learning Outcome

CLO 1: Construct various graphical and command line in Window Server and Linux utilities to ensure the proper operation of the system. (P3, PLO3)

CLO 2: Perform different types of services using Windows Server and Linux. (P4, PLO6)

CLO 3: Demonstrate good ethical practices when performing various autonomous functions for system server. (A3, PLO11)

08 DFP50413 INTEGRATIVE PROGRAMMING TECHNOLOGIES

Course Learning Outcome

CLO 1 : Construct user interface by using java package in developing interactive GUI application (P4, PLO3)

CLO 2 : Demonstrate effective interpersonal that show event-based GUI handling principles in Java program. (A2, PLO4)

CLO 3 : Practices the ethical and professional skills in designing GUI applications to solve real world problems based on Java programming environment. (A3, PLO11)

Synopsis

INTEGRATIVE PROGRAMMING AND TECHNOLOGIES course introduces students to the knowledge of Graphical User Interface (GUI) programming in Java. This course addresses the creation of interactive GUIs through standalone front-end applications. This course primarily focuses on the Swing and Abstract Window Toolkit (AWT) library with addition of Java Database Connectivity (JDBC) API. The application of the libraries will equips students with knowledge in the development of database applications solutions.

Synopsis & Course Learning Outcomes

Track SAD
Software & Application Development

09 DFP50393 PYTHON PROGRAMMING

Synopsis

PYTHON PROGRAMMING introduces with the knowledge and skills needed to develop applications using Python with structured and Object Oriented Programming technique. Upon completion, students should be able to design and code a program, understand file and directory handling, design Graphical User Interface (GUI) which integrate with database using Python Programming.

Course Learning Outcome

CLO 1 : Construct Python application based on given scenario . (P4, PLO3)

CLO 2 : Demonstrates effective leadership and teamwork related to Python Environment. (A3, PLO8)

CLO 3 : Demonstrates the ethical and professional skills in developing GUI and database in Python. (A3, PLO11)

10 DFP50403 JAVA WEB DEVELOPMENT

Course Learning Outcome

CLO 1 : Construct a dynamic web application using JSP and database within Java EE platform. (P4, PLO3)

CLO 2 : Demonstrate effective communication skill about the integration of JSP and web security in developing web application. (A3, PLO5)

CLO 3 : Display the ability to visualize the development process web application development using JSP. (P3, PLO6)

Synopsis

Java Web Development course explores web technologies, Java EE, and fundamental web application principles. Students will gain skills in creating dynamic web pages using Java Server Pages (JSP), establishing database connections through JDBC and ensuring secure web application deployment. Upon completion, they will be proficient in developing powerful Java-based web applications.

Synopsis & Course Learning Outcomes

Track NS
Networking System





Synopsis & Course Learning Outcomes

Track NS
Networking System

TRACK	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PROGRAMME LEARNING OUTCOME (PLO)											PREREQUISITE / CO-REQUISITE
			L	P	T	O		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	
								Knowledge & Understanding	Cognitive Skills	Practical Skills	Interpersonal Skills	Communication Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy & Responsibility	Personal Skills	Entrepreneurial Skills	Ethics & Professionalism	
								CLS1	CLS2	CLS3A	CLS3B	CLS3C	CLS3D	CLS3E	CLS3F	CLS4A	CLS4B	CLS5	
DISCIPLINE CORE COURSES OF NETWORKING SYSTEM TRACK																			
SUBJECT 1	DFN30373	Switching Essentials	2	3	0	0	3		√	√			√						DFC20293
SUBJECT 2	DFN30483	Web Design Technology	2	3	0	0	3	√		√	√								
SUBJECT 3	DFN40393	Routing Essentials	1	4	0	0	3			√			√		√				DFN30373
SUBJECT 4	DFN40403	Windows Server Administration	1	4	0	0	3			√					√			√	DFC10273
SUBJECT 5	DFN40493	Python Programming	2	3	0	0	3			√	√							√	DFC20203
SUBJECT 6	DFN40503	Embedded Internet Of Things (IOT)	2	3	0	0	3			√			√				√		
SUBJECT 7	DFN40512	Structured Cabling In Networking	1	3	0	0	2			√								√	
SUBJECT 8	DFN50443	Enterprise Network	1	4	0	0	3			√		√					√		
SUBJECT 9	DFN50453	Open Source Server Administration	2	3	0	0	3			√					√			√	
SUBJECT 10	DFN50523	Network Security	1	4	0	0	3			√							√	√	
PROJECT COURSE OF NETWORKING SYSTEM TRACK																			
PROJECT	DFT50194	Integrated Project	2	3	0	0	4			√		√			√	√			ALL CORE COMPUTING COURSES
FREE ELECTIVE																			
1	DUD10012	Design Thinking	1	0	0	1	2		√			√							
2	DUG30032	Green Technology Compliance	1	2	0	0	2		√	√		√							

Synopsis & Course Learning Outcomes

Track NS
Networking System

01 DFN30373 SWITCHING ESSENTIALS

Synopsis

SWITCHING ESSENTIALS course introduces students to the equipment, applications, and protocols in a small, switched networks. The course provides knowledge on Inter-VLAN dynamic routing protocols which includes VLSM, VLANs and Dynamic Trunking Protocol (DTP). Students also learn about the Spanning Tree Protocol and link aggregation concepts through the introduction of EtherChannel. Students' skills are developed through hands on exercises in the laboratory on configuration, installation and troubleshooting a network.

Course Learning Outcome

CLO 1 : Organize the architecture, components and operations of switches in small network. (C4, PLO2)

CLO 2 : Perform switch configuration with advanced features to support a secured end-to-end connectivity in switched network enviroment. (P4, PLO3)

CLO 3 : Construct a small network operations by utilizing common network utilities using an appropriate simulation tool. (P4, PLO6)

02 DFN30483 WEB DESIGN TECHNOLOGY

Course Learning Outcome

CLO 1 : Explain the concepts of HTML, CSS, JavaScript and framework in developing a responsive web and mobile application to be published on web browser. (C2, PLO1)

CLO2 : Construct a program using HTML, CSS and JavaScript in developing web and mobile application. (P3, PLO3)

CLO 3 : Integrate effective interpersonal skills with peers in developing responsive web and mobile application using framework that can be view in web browser. (A2, PLO4)

Synopsis

WEB DESIGN TECHNOLOGY introduces students to basic web design using HTML (Hypertext Markup Language), CSS (Cascading Style Sheets) and JavaScript. Throughout the course students are introduced to designing a responsive web application using framework and develop a usable and efficient web mobile application in different device.

Track NS
Networking System

Synopsis & Course Learning Outcomes

03 DFN40393 ROUTING ESSENTIALS

Synopsis

ROUTING ESSENTIALS course introduces students to the architecture, components, and operations of routers in larger and more complex networks. Students learn how to configure routers for advanced functionality. By the end of this course, students will be able to configure, troubleshoot and demonstrate routers and resolve common issues with DHCP, FHRP, routing concepts, static route and OSPF in both IPv4 and IPv6 networks.

Course Learning Outcome

CLO 1 : Organize the architecture, components and operations of switches in small network. (C4, PLO2)

CLO2 : Perform switch configuration with advanced features to support a secured end-to-end connectivity in switched network enviroment. (P4, PLO3)

CLO 3 : Construct a small network operations by utilizing common network utilities using an appropriate simulation tool. (P4, PLO6)

04 DFN40403 WINDOWS SERVER ADMINISTRATION

Synopsis

WINDOWS SERVER ADMINISTRATION is a course designed to provide students with valuable skills on configuring and managing Windows Server network. Students will acquire knowledge in Windows Server networking, including DNS configuration, DHCP configuration, remote access and distributed network solutions in Windows Server environment.

Course Learning Outcome

CLO 1 : Construct various graphical and command line in Window Server and Linux utilities to ensure the proper operation of the system.(P3, PLO3)

CLO 2 : Perform different types of services using Windows Server and Linux.(P4, PLO6)

CLO 3 : Demonstrate good ethical practices when performing various autonomous functions for system server.(A3, PLO11)

Synopsis & Course Learning Outcomes

Track NS
Networking System

05 DFN40493 PYTHON PROGRAMMING

Synopsis

PYTHON PROGRAMMING Course introduces students to the essentials skills of Python Programming language. The course provides knowledge on learning to design, write, debug, and run programs encoded in the Python language. Students' skills are developed through programming exercises in the class, from writing simple functions to developing complete application.

Course Learning Outcome

CLO 1 : Construct a software application using the python programming language. (P3, PLO3)

CLO2 : Construct effective interpersonal skills in delivering application solutions by using python programming. (A3, PLO4)

CLO 3 : Present professionalism and positive attitude in verifying a software application to support reusability approach. (A3, PLO11)

06 DFN40503 EMBEDDED INTERNET OF THINGS (IOT)

Course Learning Outcome

CLO 1 : Construct a model of IoT solutions using Embedded IoT platforms. (P4, PLO3)

CLO2 : Perform the use of a digital application that utilizes database systems and interactive user interfaces
for IoT applications. (P4, PLO6)

CLO 3 : Demonstrate entrepreneurial and good managerial skills in proposing IoT solutions to solve problems. (A3, PLO10)

Synopsis

EMBEDDED INTERNET OF THINGS (IOT) course provides students with a comprehensive understanding of the Internet of Things (IoT). It develops foundational skills using hands-on lab activities that stimulate the students in applying creative problem-solving and rapid prototyping in the interdisciplinary domain of electronics, networking,security, and business. The student-centric approach translates into the student being able to ideate, design, prototype and present an IoT solution for an identified business or society need.

Track NS
Networking System

Synopsis & Course Learning Outcomes

07 DFN40512 STRUCTURED CABLING IN NETWORKING

Synopsis

SWITCHING ESSENTIALS course introduces students to the equipment, applications, and protocols in a small, switched networks. The course provides knowledge on Inter-VLAN dynamic routing protocols which includes VLSM, VLANs and Dynamic Trunking Protocol (DTP). Students also learn about the Spanning Tree Protocol and link aggregation concepts through the introduction of EtherChannel. Students' skills are developed through hands-on exercises in the laboratory on configuration, installation and troubleshooting a network.

Course Learning Outcome

CLO 1 : Construct structured network cabling that governs with international standard and industry trends. (P4, PLO3)

CLO2 : Justify sustainable practices in selecting appropriate network infrastructure solution that comply industry standards. (A3, PLO11)

08 DFN30483 WEB DESIGN TECHNOLOGY

Course Learning Outcome

CLO 1 : Perform configuration and troubleshooting of WAN technologies. (P4, PLO3)

CLO2 : Demonstrate effective communication both verbally and written to resolve WAN technologies requirements and issue. (A4, PLO5)

CLO 3 : Integrate effective entrepreneurial skills in fulfilling network requirements of WAN technologies. (A4, PLO10)

Synopsis

ENTERPRISE NETWORK course introduces students to the operation of enterprise WAN technology protocols in a large and complex network. The course enables students to understand the selection criteria of WAN Technologies to meet network requirements. Students learn how to configure and troubleshoot routers for advanced enterprise networking and resolve common issues in global multi-area network.

Synopsis & Course Learning Outcomes

Track NS
Networking System

09 DFN50453 OPEN SOURCE SERVER ADMINISTRATION

Synopsis

OPEN SOURCE SERVER ADMINSTRATION course is designed to provide students with skills on managing servers used to administer Campus Area Network (CAN) and network services needed. Students will acquire knowledge and skills in using Linux to configure services for Campus Area Network (CAN) environment.

Course Learning Outcome

CLO 1 : Construct different type of services using open source application server that can provide efficient and control access to all resources in a Campus Area Network (CAN). (P4, PLO3)

CLO2 : Demonstrate responsibility in managing a sustainable system server for optimal performance and future scalability in a Campus Area Network (CAN). (A3, PLO8)

CLO 3 : Integrate sustainable practices in various autonomy function for system server in a Campus Area Network (CAN). (A4, PLO11)

10 DFN50523 NETWORK SECURITY

Course Learning Outcome

CLO 1 : Reproduce various technique using various tools and technologies effectively to protect the given network from attack and threats (P3,PLO3)

CLO2 : Relate entrepreneurial interest with proper technique and procedure in network security environment for communities (A3, PLO10)

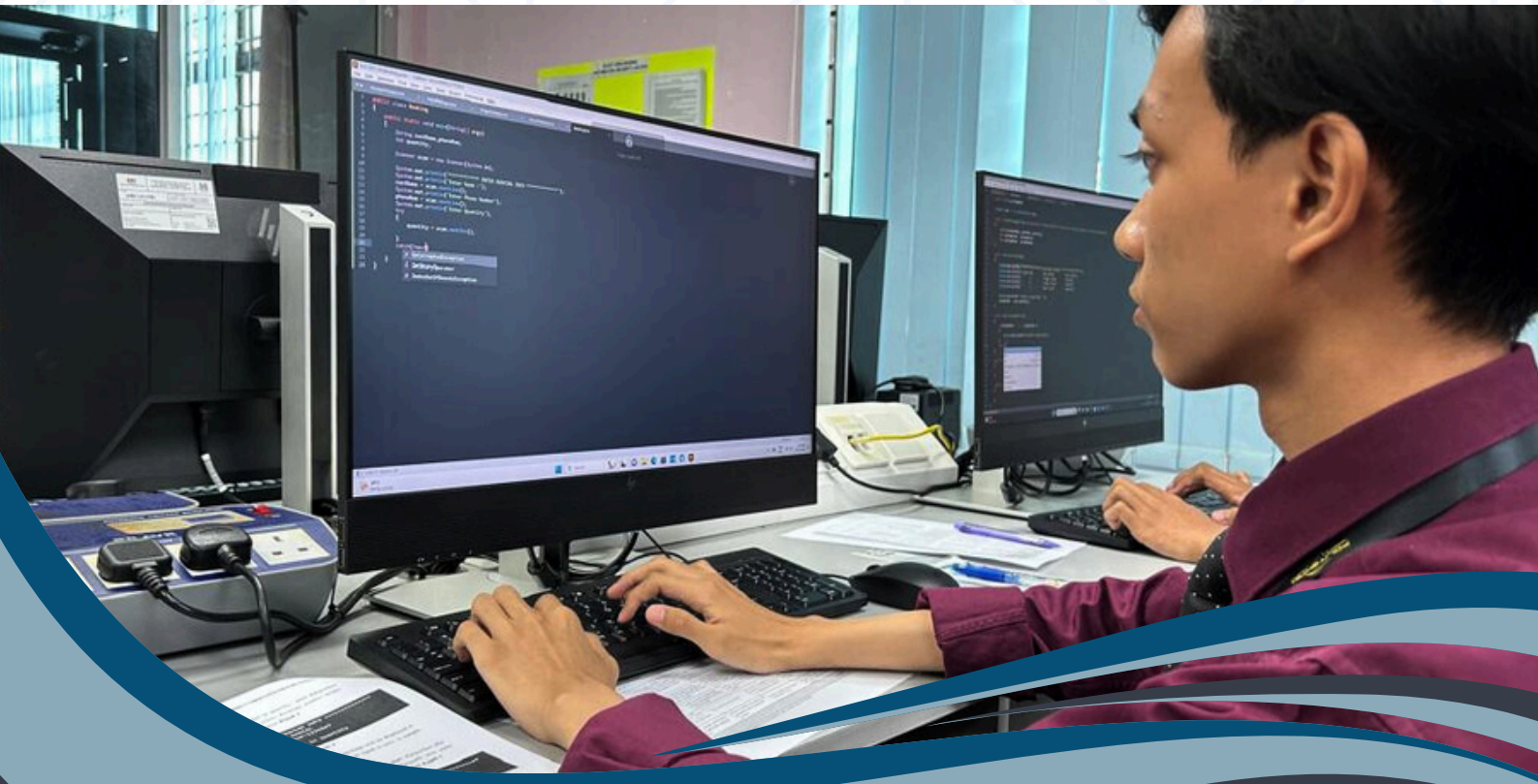
CLO 3 : Demonstrate professional ethic in managing vulnerabilities, attacks and defense mechanism in common network (A4, PLO11)

Synopsis

NETWORK SECURITY course is designed to helps students develop the skills needed for entry-level network security career opportunities. It provides a theoretically rich, hands-on introduction to network security, in a logical sequence driven by technologies. It also provide an in-depth, theoretical understanding of network security, provide knowledge and skills necessary to design and support network security, provide an experience-oriented course that employs industry-relevant instructional approaches to prepare for entry-level jobs in the industry, and to have significant hands-on interaction with IT equipment to prepare for exams and career opportunities.

Track

IS Information Security



Synopsis & Course Learning Outcomes

Track IS
Information Security

TRACK	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PROGRAMME LEARNING OUTCOME (PLO)											PREREQUISITE / CO-REQUISITE
			L	P	T	O		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	
								Knowledge & Understanding	Cognitive Skills	Practical Skills	Interpersonal Skills	Communication Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy & Responsibility	Personal Skills	Entrepreneurial Skills	Ethics & Professionalism	
								CLS1	CLS2	CLS3A	CLS3B	CLS3C	CLS3D	CLS3E	CLS3F	CLS4A	CLS4B	CLS5	
DISCIPLINE CORE COURSES OF INFORMATION SECURITY TRACK																			
SUBJECT 1	DFS30263	Cyber Law	2	2	0	0	3	√		√					√				
SUBJECT 2	DFS30273	Information Security	2	3	0	0	3			√							√	√	
SUBJECT 3	DFS40283	Server Administration	2	3	0	0	3			√			√					√	
SUBJECT 4	DFS40293	Ethical Hacking	2	3	0	0	3			√					√			√	
SUBJECT 5	DFS40303	Information Security Management System	2	2	0	0	3		√	√	√								
SUBJECT 6	DFS40312	Malware Analysis	1	2	0	0	2			√							√		
SUBJECT 7	DFS40323	Digital Forensic	1	4	0	0	3			√			√					√	
SUBJECT 8	DFS50333	Computer Network Security	2	3	0	0	3			√					√		√		
SUBJECT 9	DFS50353	Incident Response Handling	2	3	0	0	3			√		√	√						
SUBJECT 10	DFS50363	Web Design and Technology	2	3	0	0	3			√	√							√	
PROJECT COURSE OF INFORMATION SECURITY TRACK																			
PROJECT	DFT50194	Integrated Project	2	3	0	0	4			√		√			√	√			ALL CORE COMPUTING COURSES
FREE ELECTIVE																			
1	DUD10012	Design Thinking	1	0	0	1	2		√			√							
2	DUG30032	Green Technology Compliance	1	2	0	0	2		√	√		√							

Synopsis & Course Learning Outcomes

Track IS
Information Security

01 DFS30263 CYBER LAW

Synopsis

CYBER LAW course deals with some of the major legal aspects of computing which are related to the various aspects of law. Some leading topics include cybercrimes, electronic and digital signatures, intellectual property, data protection and privacy and crimes in information communication and technology. Students are exposed to the cyber laws in Malaysia which govern the process and dissemination of information digitally. This course also teaches students the importance of adhering to cyber laws and regulation in order to regulate and protect the ICT industry from misuse and illegal activities.

Course Learning Outcome

CLO 1:Explain various types of law environment that related to current issues. (C2, PLO1)

CLO 2:Follow appropriate techniques in demonstrating digital security in various contexts.(P3, PLO3)

CLO 3:Demonstrate effective leadership in discussing cyber security issues guided by cyber rules and regulations.(A3, PLO8)

02 DFS30273 INFORMATION SECURITY

Course Learning Outcome

CLO 1:Trace using a basic tool of information security countermeasures for threats and attacks in a security environment. (P3, PLO3)

CLO 2:Perform entrepreneur skills in managing techniques and procedures towards securing information.
(A2, PLO10)

CLO 3:Demonstrate ethics and professionalism by using appropriate tools in the concept of information security. (A3, PLO11)

Synopsis

INFORMATION SECURITY (IS) course provides a foundation in the basic information knowledge and skills necessary for ICT professionals. Students are exposed to the principles and good practices in environmentally sustainable secured computing and the use of appropriate tools and technologies in managing IS environment.

Track IS
Information Security

Synopsis & Course Learning Outcomes

03 DFS40283 SERVER ADMINISTRATION

Synopsis

SERVER ADMINSTRATION course is designed to provide a comprehensive understanding of both Linux and Windows server operating systems. Throughout this course, students will gain hands-on experience and practical knowledge in administering, configuring, and maintaining Linux and Windows Server. The course aims to develop a solid foundation in server administration skills, ensuring that learners can effectively manage a wide range of server environments.

Course Learning Outcome

CLO 1: Construct various graphical and command line in Window Server and Linux utilities to ensure the proper operation of the system. (P3, PLO3)

CLO 2: Perform different types of services using Windows Server and Linux. (P4, PLO6)

CLO 3: Demonstrate good ethical practices when performing various autonomous functions for system server. (A3, PLO11)

04 DFS40293 ETHICAL HACKING

Course Learning Outcome

CLO 1 : Perform hacking methodologies and techniques in ethical hacking. (P4, PLO3)

CLO 2 : Organize penetration testing skills in order to display the effective leadership. (A4, PLO8)

CLO 3 : Demonstrate a good practice and ethics in ethical hacking at work place. (A3, PLO11)

Synopsis

ETHICAL HACKING course provides technical skills to penetrate networks and/or computer system using the same methods as a hacker. The goal of ethical hackers is to help organizations take pre-emptive measures against malicious attacks by attacking system themselves, whilst staying within legal limits. This course also introduces students to the professional ethics in which computer professionals apply codes of ethics, ethical issues and standards of good practice within their profession.

Synopsis & Course Learning Outcomes

Track IS
Information Security

05 DFS40303 INFORMATION SECURITY MANAGEMENT SYSTEM

Synopsis

INFORMATION SECURITY MANAGEMENT SYSTEM course provides a foundation in the Information Security Management System (ISMS) knowledge and skills necessary for ICT professionals. Students are exposed to ISMS domain, security policies, concept, auditing and good practices in securing computing management and the use of standards and policies in organization. This course provides students with the good knowledge of ISMS implemention to ensure the smooth process of organization operations.

Course Learning Outcome

CLO 1 : Apply the security standards in Information Security Management System. (C3, PLO2)

CLO 2 : Construct policies statement and procedures to maintain and improve Information Security Management System. (P4, PLO3)

CLO 3 : Demonstrate interpersonal skills related to Information Security Management System(A3, PLO4)

06 DFS40312 MALWARE ANALYSIS

Course Learning Outcome

CLO 1 : Follow appropriate methods to analyze malware attacks in network environment. (P3, PLO3)

CLO 2 :Propose report analysis for malware services in network organization. (A3, PLO10)

Synopsis

MALWARE ANALYSIS is a complex and constantly evolving field that plays a critical role in modern cybersecurity. As the number and complexity of malware threats continue to increase, malware analysis has become an essential skill for security professionals, incident responders, and forensic investigators. The goal of malware analysis is to gain a deep understanding of the behavior, capabilities, and intent of a piece of malicious software. This knowledge is used to identify and mitigate security threats, prevent future attacks, and improve the overall security posture of an organization.

Track IS
Information Security

Synopsis & Course Learning Outcomes

07 DFS40323 DIGITAL FORENSIC

Synopsis

DIGITAL FORENSIC course introduces students to collect and analyze electronic evidence to investigate cybercrime. It covers computer hardware and software, data recovery, steganography using digital forensic tools.
Student will learn how to perform an investigation techniques with code of ethics in investigation.

Course Learning Outcome

CLO 1 : Construct various graphical and command line in Window Server and Linux utilities to ensure the proper operation of the system. (P3, PLO3)

CLO 2 : Perform different types of services using Windows Server and Linux.
(P4, PLO6)

CLO 3 : Demonstrate good ethical practices when performing various autonomous functions for system server. (A3, PLO11)

08 DFS50333 COMPUTER NETWORK SECURITY

Course Learning Outcome

CLO 1 : Perform security procedures to prevent vulnerabilities and attacks in a computer network environment.
(P4, PLO3)

CLO 2 : Prepare the security issues' report in order to demonstrate effective leadership. (A4, PLO8)

CLO 3 : Propose network security monitoring tools for countermeasures against attacks within a networked organization. (A3, PLO10)

Synopsis

COMPUTER NETWORK SECURITY course is designed to focus on the overall security processes based on security policy, emphasizing hands-on skills in the areas of secure perimeter, secure connectivity, identity services, and intrusion detection. This course will analyze the network and address malware with threat detection techniques. The knowledge delivered will enable students to identify some of the security approaches to designing a defensive strategy in a computer network environment.

Synopsis & Course Learning Outcomes

Track IS
Information Security

09 DFS50353 INCIDENT RESPONSE HANDLING

Synopsis

INCIDENT RESPONSE HANDLING course provides basic knowledge on dealing with system security related incidents. It increase knowledge on potential defenses and counter measures against common threat vectors/vulnerabilities using tools and common processes in performing analysis of compromised systems. This course also include details process in assessing and mitigating risk in real environment

Course Learning Outcome

CLO 1 : Trace basic analysis of compromised systems using tools and common processes. (P3, PLO3)

CLO 2: Work effectively in both verbal and non-verbal communications for incident response handling issues. (A3, PLO5)

CLO 3 : Perform incident response handling report using appropriate tools. (P4, PLO6)

10 DFS50363 WEB DESIGN TECHNOLOGY

Course Learning Outcome

CLO 1 : Construct a program using HTML, CSS and JavaScript in developing web and mobile application. (P4, PLO3)

CLO 2 :Practice effective interpersonal skills with peers in developing responsive web and mobile application using framework that can be view in web browser. (A3, PLO4)

CLO 3 :Demonstrate a good practice and ethics in performing the responsive web and mobile application. (A4, PLO11)

Synopsis

WEB DESIGN TECHNOLOGY introduces students to fundamental web design principles using HTML (Hypertext Markup Language), CSS (Cascading Style Sheets), and JavaScript. Throughout the course, students learn to design responsive web applications utilizing frameworks, ultimately developing usable and efficient mobile web applications for various devices.

Synopsis & Course Learning Outcomes

Track GAME
Digital Game Programming



Synopsis & Course Learning Outcomes

Track GAME
Digital Game Programming

TRACK	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PROGRAMME LEARNING OUTCOME (PLO)											PREREQUISITE / CO-REQUISITE
			L	P	T	O		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	
								Knowledge & Understanding	Cognitive Skills	Practical Skills	Interpersonal Skills	Communication Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy & Responsibility	Personal Skills	Entrepreneurial Skills	Ethics & Professionalism	
								CLS1	CLS2	CLS3A	CLS3B	CLS3C	CLS3D	CLS3E	CLS3F	CLS4A	CLS4B	CLS5	
DISCIPLINE CORE COURSES OF DIGITAL GAME PROGRAMMING TRACK																			
SUBJECT 1	DFG30433	Principles of Game	2	2	0	0	3		√	√								√	
SUBJECT 2	DFG30543	Digital Multimedia	1	3	0	0	3			√							√	√	
SUBJECT 3	DFS40283	Server Administration	2	3	0	0	3			√			√					√	
SUBJECT 4	DFG40463	Interactive 2D Programming	1	4	0	0	3			√		√			√				
SUBJECT 5	DFG40553	Mobile Game Programming	2	3	0	0	3			√	√						√		
SUBJECT 8	DFG50503	Interactive 3D Programming	1	3	0	0	3			√							√	√	DFG40463
SUBJECT 9	DFG50513	Mathematics And Physics In Programming	1	3	0	0	3			√			√		√				
SUBJECT 10	DFG50523	Fundamentals Of Augmented Reality	2	2	0	0	3	√		√					√				
PROJECT COURSE OF DIGITAL GAME PROGRAMMING TRACK																			
PROJECT	DFG50534	Project	2	3	0	0	4			√					√		√	√	DFG30433, DFG40463, ALL CORE COMPUTING COURSES
FREE ELECTIVE																			
1	DUD10012	Design Thinking	1	0	0	1	2		√			√							
2	DUG30032	Green Technology Compliance	1	2	0	0	2		√	√		√							
SUBJECT 6	DFG40473	Digital Drawing ***	1	3	0	0	3			√			√					√	
SUBJECT 7	DFG40482	Principles Of Animation ***	1	2	0	0	2			√	√								

Synopsis & Course Learning Outcomes

Track GAME
Digital Game Programming

01 DFG30433 PRINCIPLES OF GAME

Synopsis

PRINCIPLES OF GAME offers a holistic approach to games programming and development. Students will explore the foundational principles of game design, delve into programming essentials, and master game mechanics. By the end of the course, students will have the knowledge and skills needed to fix programming problem of the games. It also introduce the philosophies of game design and the theory in developing game. This includes games programming environment and the roles and the responsibilities of the game programmer. Its allow the students to explore current trends in game design tools, technique and development phase.

Course Learning Outcome

CLO 1 : Explain the concept and terminologies related to game programming in creating game. (C4,PLO2)

CLO 2 : Fix programming problems on game replication from game programming library. (P3,PLO3)

CLO 3 : Demonstrate professional ethics and commitment during the implementation of game programming. (A3,PLO11)

02 DFG30543 DIGITAL MULTIMEDIA

Course Learning Outcome

CLO 1 : Manipulate the aspects of multimedia development model in relation to appropriate and acceptable design techniques used to produce multimedia products. (P3, PLO3)

CLO 2 : Demonstrate a multimedia production to showcase its commercial value. (A3, PLO10)

CLO 3 : Follow the professional codes of conduct and ethical guidelines specific to the digital multimedia industry. (A3, PLO11)

Synopsis

DIGITAL MULTIMEDIA provides students with a comprehensive understanding of the rapidly evolving field of digital communication and multimedia production. Through a combination of theoretical exploration and hands-on practical work, students will gain the skills and knowledge necessary to navigate and excel in the digital media landscape. This course covers a part of multimedia concepts and applications utilizing text, graphics, animation, sound, and video applications in the design, development, and creation of multimedia presentations and publications within an interactive environment.

Track GAME

Synopsis & Course Learning Outcomes

Digital Game Programming

03 DFS40283 SERVER ADMINISTRATION

Synopsis

SERVER ADMINSTRATION course is designed to provide a comprehensive understanding of both Linux and Windows server operating systems. Throughout this course, students will gain hands-on experience and practical knowledge in administering, configuring, and maintaining Linux and Windows Server. The course aims to develop
a solid foundation in server administration skills, ensuring that learners can effectively manage a wide range of server environments.

Course Learning Outcome

CLO 1 : Construct various graphical and command line in Window Server and Linux utilities to ensure the proper operation of the system. (P3, PLO3)

CLO 2 : Perform different types of services using Windows Server and Linux.
(P4, PLO6)

CLO 3 : Demonstrate good ethical practices when performing various autonomous functions for system server. (A3, PLO11)

04 DFG40463 INTERACTIVE 2D PROGRAMMING

Course Learning Outcome

CLO 1 : Manipulate sprites, interactivity, level design and scripting skills of programming development tools to maintain coherency in 2D programming environment (P4, PLO3)

CLO 2 : Explain orally and writing the series of progressive and complete 2D programming development process in convincing the end product (A3, PLO5)

CLO 3 : Organize effectively team members to produce 2D application documentation by using development tools (A4, PLO8)

Synopsis

INTERACTIVE 2D PROGRAMMING offers a comprehensive introduction to the intricate world of 2D application creation. Through understanding and mastering key concepts like sprites, objects, interactivity, level design, and scripting, students and aspiring developers are empowered to conceptualize, design, and develop applications across a spectrum of genres, creating immersive experiences for players around the world

Synopsis & Course Learning Outcomes

Track GAME
Digital Game Programming

05 DFG40553 MOBILE GAME PROGRAMMING

Synopsis

MOBILE GAME PROGRAMMING introduces students to programme interactive application for mobile devices.This course will be hands-on and project-based, which motivates students to create interactive mobile applications using scripting and game development tools.The students will be able to understand the concepts of programming for mobile game and mobile application, collision detection, scripting and porting in the development of mobile application.

Course Learning Outcome

CLO 1 : Follow programming concept and theories in mobile application development. (P3, PLO3)

CLO 2 : Demonstrate interpersonal skills to develop mobile application in a team. (A3, PLO4)

CLO 3 : Construct an interactive mobile application to meet industry standard and market demand. (A3, PLO10)

06 DFG40473 DIGITAL DRAWING

Course Learning Outcome

CLO 1 : Sketch an aesthetic drawing digitally by using appropriate software. (P4, PLO3)

CLO 2 : Perform various drawing styles and techniques using digital technologies to illustrate an idea. (P4, PLO6)

CLO 3 : Demonstrate an appropriate drawing concept for the construction of game assets. (A3, PLO11)

Synopsis

DIGITAL DRAWING introduces students to the basic of digital drawing. This course provides students with the fundamental of computer drawing techniques in combination with raster and vector based software such as Adobe Photoshop, Illustrator and other imaging programs.

Track GAME
Digital Game Programming

Synopsis & Course Learning Outcomes

07 DFG40482 PRINCIPLES OF ANIMATION

Synopsis

PRINCIPLE OF ANIMATION introduces the concepts of animations. Students are introduced to basic principles of animation such as Squash and Stretch, Timing and Weight, Anticipation, Slow-In-Slow-Out, and Arcs. Students will explore visual communication skills, e.g. constructing visual "path of action" for visualizing natural movement on paper.

Course Learning Outcome

CLO 1 : Manipulate a dynamic visual path of action, frames and time to achieve realistic and appealing animatic movements in animation. (P4, PLO3)

CLO 2 : Organize team member effectively to produce 2D or 3D digital animations by implementing various principles of animation techniques. (A4, PLO4)

08 DFG50503 INTERACTIVE 3D PROGRAMMING

Course Learning Outcome

CLO 1 : Construct an interactive 3D programming application by using the interaction, animation and basic artificial intelligence to test the functionality of the application. (P4, PLO3)

CLO 2 : Demonstrate an interactive 3D programming application to meet industry standard and market demand. (A3, PLO10)

CLO 3 : Follow professional ethics to produce interactive 3D applications using appropriate software. (A3, PLO11)

Synopsis

INTERACTIVE 3D PROGRAMMING introduces the basic ideas to the development and coding activities involved in creating 3D computer application. This course is designed to provide students with the fundamental skills and knowledge required to create basic 3D computer applications. This hands-on course will take students on a journey through the exciting world of 3D application development, covering programmable asset for application development, navigation and pathfinding, deployment and testing. By the end of the course, students will have the confidence to develop their own simple interactive 3D digital environment application.

Synopsis & Course Learning Outcomes

Track GAME
Digital Game Programming

09 DFG50513 MATHEMATICS AND PHYSICS IN PROGRAMMING

Synopsis

MATHEMATICS AND PHYSICS IN PROGRAMMING introduces general mathematics and physics concept in game like vector, coordinate, quaternion, Newton Laws of Motion, projectile, collision and ray casting. This course encourages student to develop their generic skills such as teamwork and problem solving skills. This course also trains the student to create their own application by applying the concept of mathematics and physics.

Course Learning Outcome

CLO 1 : Perform physics principles and mathematical equations to achieve realistic movements and animations for basic IT applications. (P4, PLO3)

CLO 2 : Construct applications regarding mathematical and physics concepts by using appropriate software. (P4, PLO6)

CLO 3 : Organize team members efficiently to create applications using appropriate IT Tools.(A4, PLO8)

10 DFG50523 FUNDAMENTALS OF AUGMENTED REALITY

Synopsis

FUNDAMENTALS OF AUGMENTED REALITY introduces students to the exciting world of Augmented Reality (AR), a cutting-edge technology that blends virtual elements with the real world to create immersive and interactive experiences. Students will learn the foundational concepts and principles of AR, along with the necessary skills to create basic AR applications.

Course Learning Outcome

CLO 1 : Explain the knowledge of AR is applied on application design and development. (C3, PLO1)

CLO 2 : Construct AR application for game development using a suitable engine. (P3, PLO3)

CLO 3 : Organize team members effectively to produce AR application. (A4, PLO8)

Synopsis & Course Learning Outcomes

Track WEB
Web Development



Synopsis & Course Learning Outcomes

Track WEB
Web Development

TRACK	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PROGRAMME LEARNING OUTCOME (PLO)											PREREQUISITE / CO-REQUISITE
			L	P	T	O		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	
								Knowledge & Understanding	Cognitive Skills	Practical Skills	Interpersonal Skills	Communication Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy & Responsibility	Personal Skills	Entrepreneurial Skills	Ethics & Professionalism	
								CLS1	CLS2	CLS3A	CLS3B	CLS3C	CLS3D	CLS3E	CLS3F	CLS4A	CLS4B	CLS5	
DISCIPLINE CORE COURSES OF DIGITAL GAME PROGRAMMING TRACK																			
SUBJECT 1	DFG30433	Principles of Game	2	2	0	0	3		√	√								√	
SUBJECT 2	DFG30543	Digital Multimedia	1	3	0	0	3			√							√	√	
SUBJECT 3	DFS40283	Server Administration	2	3	0	0	3			√			√					√	
SUBJECT 4	DFG40463	Interactive 2D Programming	1	4	0	0	3			√		√			√				
SUBJECT 5	DFG40553	Mobile Game Programming	2	3	0	0	3			√	√						√		
SUBJECT 8	DFG50503	Interactive 3D Programming	1	3	0	0	3			√							√	√	DFG40463
SUBJECT 9	DFG50513	Mathematics And Physics In Programming	1	3	0	0	3			√			√		√				
SUBJECT 10	DFG50523	Fundamentals Of Augmented Reality	2	2	0	0	3	√		√					√				
PROJECT COURSE OF DIGITAL GAME PROGRAMMING TRACK																			
PROJECT	DFG50534	Project	2	3	0	0	4			√					√		√	√	DFG30433, DFG40463, ALL CORE COMPUTING COURSES
FREE ELECTIVE																			
1	DUD10012	Design Thinking	1	0	0	1	2		√			√							
2	DUG30032	Green Technology Compliance	1	2	0	0	2		√	√		√							
SUBJECT 6	DFG40473	Digital Drawing ***	1	3	0	0	3			√			√					√	
SUBJECT 7	DFG40482	Principles Of Animation ***	1	2	0	0	2			√	√								

Synopsis & Course Learning Outcomes

Track WEB
Web Development

01 DFW30203 WEB DESIGN TECHNOLOGY

Synopsis

WEB DESIGN TECHNOLOGY introduces students to basic web design using HTML (Hypertext Markup Language), CSS (Cascading Style Sheets), JavaScript and Mobile web framework. Throughout the course students will learn to plan and design interactive web pages, enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia elements. Thus producing a functional, multi-pages website.

Course Learning Outcome

CLO 1 : construct html, css, javascript and jquery in developing an interactive web page that can be published on web browser. (P4, PLO3)

CLO 2 : design an interactive web page that can be viewed on a web browser.
(P4, PLO6)

CLO 3 : relate entrepreneurial mindset in creating an interactive web page.
(A4, PLO10)

02 DFP30323 OBJECT ORIENTED PROGRAMMING

Course Learning Outcome

CLO 1 : Explain the concepts of Object Oriented Programming in application development. (C2, PLO1)

CLO 2 : Construct Object Oriented Programming concept in Java programming. (P4, PLO3)

CLO 3 : Follow the professional ethics in group to develop a solution for a given scenario. (A3, PLO11)

Synopsis

OBJECT ORIENTED PROGRAMMING (OOP) course introduces students to the principles and concepts behind the paradigm of OOP and features in Java. This course introduces students on how to write, compile and run programs, make effective use of some of the standard packages, write object-oriented code using classes and objects, inheritance, and polymorphism along with the use of exception handling.

Track WEB
Web Development

Synopsis & Course Learning Outcomes

03 DFP40333 FULL STACK WEB DEVELOPMENT

Synopsis

FULL STACK WEB DEVELOPMENT course is designed to equipped students with the essential skills needed to create dynamic, interactive, and responsive websites and web applications. Students will learn the fundamentals of HTML, CSS, JavaScript, MySQL and PHP while harnessing the power of Bootstrap, a popular front-end framework. Throughout the course, they will master the art of crafting modern and visually appealing web interfaces, implementing interactive elements, and seamlessly integrating back-end functionality. By the end of the course, students will have the confidence to design, develop, and deploy feature-rich web projects efficiently, making them proficient in the fast-paced world of web development.

Course Learning Outcome

CLO 1 : Integrate PHP and MySQL with Bootstrap to build database-driven web applications projects. (P4, PLO3)

CLO 2 : Demonstrate positive leadership in developing interactive dynamic web application that can be view in web browser. (A3, PLO8)

CLO 3 : Demonstrate entrepreneur skills that related to web application development activities. (A2,PLO10)

04 DFS40283 SERVER ADMINISTRATION

Course Learning Outcome

CLO 1 : Construct various graphical and command line in Window Server and Linux utilities to ensure the proper operation of the system. (P3, PLO3)

CLO 2 : Perform different types of services using Windows Server and Linux. (P4, PLO6)

CLO 3 : Demonstrate good ethical practices when performing various autonomous functions for system server. (A3, PLO11)

Synopsis

SERVER ADMINSTRATION course is designed to provide a comprehensive understanding of both Linux and Windows server operating systems. Throughout this course, students will gain hands-on experience and practical knowledge in administering, configuring, and maintaining Linux and Windows Server. The course aims to develop a solid foundation in server administration skills, ensuring that learners can effectively manage a wide range of server environments.

Synopsis & Course Learning Outcomes

Track WEB
Web Development

05 DFW40113 PHP PROGRAMMING IN WEB DEVELOPMENT

Synopsis

PHP PROGRAMMING IN WEB DEVELOPMENT course will provide a basic understanding of the methods and techniques of developing a simple to moderately complex web site. Using the current standard web page language, students will be instructed on creating and maintaining a simple web site. After the foundation language has been established, the aid of a web editor will be introduced. A second web-based language will be included to further enhance the web sites. Throughout the course, students will learn proper techniques to develop web based applications starting from designing interfaces to publishing application to a production server.

Course Learning Outcome

CLO 1 : Construct PHP programming structure and database connectivity to develop a dynamic webpage that connects to a MySQL database. (P4,PLO3)

CLO 2 : Integrate an entrepreneurial mindset in developing a dynamic web page using PHP programming. (A4, PLO10)

CLO 3 : Relate professional ethics to the work involved in the development of web in PHP programming. (A4, PLO11)

06 DFW40122 CONTENT MANAGEMENT SYSTEM

Course Learning Outcome

CLO 1 : Builds skills to manage website content within a user-friendly interface environment. (P3, PLO3)

CLO 2 : Demonstrates effective communication and writing skills to lead a website development team using a Content Management System. (A3, PLO5)

Synopsis

CONTENT MANAGEMENT SYSTEM introduces web development process that is concerned with all aspects of software product from the early stages of content development, system requirement, software development, software design and implementation process. Through this course, students will be able to use software applications that enable them to create, edit, collaborate on, publish and store digital content. Hence, students can develop a website that tailored its content and advertising to a user's specific characteristics using information a user provides or a website gathers.

Track WEB
Web Development

Synopsis & Course Learning Outcomes

07 DFW40173 DATABASE MANAGEMENT

Synopsis

DATABASE MANAGEMENT course will help students to develop the database administration capabilities regarding creating and managing database, users, roles and resources. It also gives them in depth knowledge of important features of Oracle database administration.

Course Learning Outcome

CLO 1 : Discover the database environment, database management, data protection, backup and recovery utilities in practicing existing database. (C3,PLO 2)

CLO 2 : Builds an application using an appropriate tools in database management. (P4, PLO3)

CLO 3 : Demonstrate leadership qualities and responsibilities of team members in database management activity. (A3,PLO8)

08 DFW50143 SECURITY IN WEB DEVELOPMENT

Course Learning Outcome

CLO 1 : Display skills to trace the vulnerabilities associated with web development content using appropriate tools, security measures and cutting edge of web security. (P4, PLO3)

CLO 2 : Demonstrate roles as leaders of diverse teams in web development security. (A3, PLO8)

CLO 3 : Demonstrate the good values and ethics in the security of web development. (A3, PLO11)

Synopsis

SECURITY IN WEB DEVELOPMENT course will help students to understand the web and authentication security. It exposes the students about the vulnerabilities in web application and how to countermeasures the vulnerabilities. It also gives them in depth knowledge of web application security principles. In this course also student are able to understanding and mastering authentication mechanisms, and applying security principles effectively. This course consist of practical work, problem based learning, presentation in lab and mini projects that allow students to apply the concepts they learn in real-world scenarios.

Synopsis & Course Learning Outcomes

Track WEB
Web Development

09 DFW50153 INTEGRATIVE APPLICATION DEVELOPMENT

Synopsis

INTEGRATIVE APPLICATION DEVELOPMENT course introduces students to the knowledge of Graphical User Interface (GUI) development using JavaFX package. JavaFX is a set of graphics and media packages that enables developers to design, create, test, debug and deploy Rich Internet Applications (RIA) that can run on multiple
platforms including Web, Mobile and Desktop. This course addresses the creation of interactive GUI application that integrates with Java Database Connectivity (JDBC)

Course Learning Outcome

CLO 1 : Construct the elements of Graphic User Interface (GUI) by using JavaFX package. (P4,PLO3)

CLO 2 : Demonstrate effective interpersonal skills with peers in developing GUI applications based on JavaFX package. (A3, PLO4)

CLO 3 : Perform the principles of event-based GUI handling in a JavaFX package (P4, PLO6)

10 DFW50193 WEB FRAMEWORK APPLICATION

Course Learning Outcome

CLO 1 : Construct concept of web framework to support web application development. (P3, PLO3)

CLO 2 : Integrate effective interpersonal skills with peers in developing web applications using appropriate PHP framework. (A4, PLO4)

CLO 3: Demonstrate effective leadership with peer in developing web applications using appropriate web framework application. (A3, PLO8)

Synopsis

WEB FRAMEWORK APPLICATION course will provide students with the basic understanding of the method and structures of developing web application using PHP framework. This course provides a solid web development foundation focusing on content, client and server side by applying CodeIgniter framework. Throughout the course, students will learn proper techniques to develop web-based applications starting from construct HTML, session and cookies, file uploading, email handling, database connectivity, deployment and security implementation in CodeIgniter. Upon completion, students should be able to accomplish complete web development using CodeIgniter.

Synopsis & Course Learning Outcomes

Track **DATA**

Data Management & Visualization





Synopsis & Course Learning Outcomes

Track DATA

Data Management & Visualization

TRACK	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PROGRAMME LEARNING OUTCOME (PLO)											PREREQUISITE / CO-REQUISITE
			L	P	T	O		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	
								Knowledge & Understanding	Cognitive Skills	Practical Skills	Interpersonal Skills	Communication Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy & Responsibility	Personal Skills	Entrepreneurial Skills	Ethics & Professionalism	
								CLS1	CLS2	CLS3A	CLS3B	CLS3C	CLS3D	CLS3E	CLS3F	CLS4A	CLS4B	CLS5	
DISCIPLINE CORE COURSES OF DIGITAL GAME PROGRAMMING TRACK																			
SUBJECT 1	DFG30433	Principles of Game	2	2	0	0	3		√	√								√	
SUBJECT 2	DFG30543	Digital Multimedia	1	3	0	0	3			√							√	√	
SUBJECT 3	DFS40283	Server Administration	2	3	0	0	3			√			√					√	
SUBJECT 4	DFG40463	Interactive 2D Programming	1	4	0	0	3			√		√			√				
SUBJECT 5	DFG40553	Mobile Game Programming	2	3	0	0	3			√	√						√		
SUBJECT 8	DFG50503	Interactive 3D Programming	1	3	0	0	3			√							√	√	DFG40463
SUBJECT 9	DFG50513	Mathematics And Physics In Programming	1	3	0	0	3			√			√		√				
SUBJECT 10	DFG50523	Fundamentals Of Augmented Reality	2	2	0	0	3	√		√					√				
PROJECT COURSE OF DIGITAL GAME PROGRAMMING TRACK																			
PROJECT	DFG50534	Project	2	3	0	0	4			√					√		√	√	DFG30433, DFG40463, ALL CORE COMPUTING COURSES
FREE ELECTIVE																			
1	DUD10012	Design Thinking	1	0	0	1	2		√			√							
2	DUG30032	Green Technology Compliance	1	2	0	0	2		√	√		√							
SUBJECT 6	DFG40473	Digital Drawing ***	1	3	0	0	3			√			√					√	
SUBJECT 7	DFG40482	Principles Of Animation ***	1	2	0	0	2			√	√								

Synopsis & Course Learning Outcomes

Track DATA

Data Management & Visualization

01 DFD30123 INTRODUCTION TO DATA MANAGEMENT

Synopsis

INTRODUCTION TO DATA MANAGEMENT is a comprehensive course that explores key concepts in the effective handling of data. It starts by covering data preparation and processing, including steps, significance, and various processing methods. The course then moves on to data catalogues and storage, explaining metadata, tools, benefits, storage operations and their importance. Additionally, it addresses data architecture and modelling, discussing principles, frameworks and best practices for creating data structures. The course concludes with a focus on data governance and security, explaining their importance, core principles, roles, responsibilities and introducing different types of security risks and protective measures. Overall, this course equips learners with a foundational understanding of essential data management practices for both efficiency and security.

Course Learning Outcome

CLO 1 : Explain the significance of data management in data cataloging and storage principles. (C3, PLO1)

CLO 2 : Develop conceptual, logical and physical data models that can translate abstract concepts into concrete database designs. (P2, PLO3)

CLO 3 : Show the entrepreneur creative ability to solve data management challenges and explore new possibilities. (A2, PLO10)

02 DFD30133 DATA MINING ESSENTIALS

Synopsis

DATA MINING ESSENTIALS introduces the overview of emerging technologies for storing and analyzing from huge databases such as businesses domains. This module covers the explanation of storage concepts, architecture and principles of data warehouse and mining. The module also covers the usage of appropriate data mining technique and tools that adapt for businessdomains. It also discovers patternsin large data sets involving methods at the intersection of machine learning, statistics, and database systems to identify future patterns.

Course Learning Outcome

CLO 1 : Construct data mining models and methods to analyze extensive datasets, facilitating informed decision-making through a deep understanding of data patterns and trends such as market research or scientific data analysis. (P4, PLO3)

CLO 2 : Demonstrate the development of effective data visualization, emphasizing technical proficiency, while also showcasing interpersonal skills in presenting useful information to diverse audiences. (A3, PLO4)

CLO 3 : Perform the implementation of frequent pattern analysis, classification, and clustering techniques for pattern analytics, utilizing entrepreneurial skills to innovate and address real-world challenges. (A3, PLO10)

Synopsis & Course Learning Outcomes

03 DFD40143 FUNDAMENTAL OF DATABASE ADMINISTRATION

Synopsis

FUNDAMENTALS OF DATABASE ADMINISTRATION course will help students to develop the database administration capabilities and will discusshow to create and manage databaseusers, roles, and resources. It also gives them in depth knowledge of important features of data protection as well as performing database backup and recovery.

Course Learning Outcome

CLO 1 : Construct correct database storage structure using appropriate Database Management System (DBMS) tools in performing database administration tasks. (P3, PLO3)

CLO 2 : Display the ability to use suitable Database Management System (DBMS) tools to perform database administration tasks. (P3, PLO6)

CLO 3 : Demonstrate appropriate ways in ensuringthe database run correctly, efficiently and securely. (A3, PLO8)

04 DFD40153 NOSQL DATABASE

Course Learning Outcome

CLO 1 : Construct NoSQL database using appropriate tools based on the data models. (P3, PLO3)

CLO 2 : Demonstrate good managerial skills when addressing challenges in NoSQL databases. (A3, PLO8)

CLO 3 : Practice professional codes of standardsto organize data for systematic data management. (A2, PLO11)

Synopsis

NOSQL DATABASE course provides students with the knowledge and skills to develop NoSQL database using four types of data models (columnar, key-value, graph, and document). This course explores the origins of NoSQL database and the characteristics that distinguish them from traditional relational database management systems. The course will introduce conceptsof NoSQL databaseand follow by an exploration of how technologies implement the NoSQL database. This course uses programming languages and open-source software to create, retrieve, and manipulate data. Upon completion, students should be able to lead team members to design, code, test and maintain NoSQL database using proper guidelines at a beginning level.

Synopsis & Course Learning Outcomes

Track DATA

Data Management & Visualization

05 DFD40163 PYTHON PROGRAMMING FOR DATA

Synopsis

PYTHON PROGRAMMING FOR DATA provides a comprehensive learning experience on harnessing the capabilities of Python for analyzing datasets and conducting data management processes. It covers a wide range of topics,including read data from varioussources, data cleaning,data analyzing and ending with data visualizations to get new insights. At the end of the course students will be sufficiently equipped to start their journey in data management and visualization.

Course Learning Outcome

CLO 1 : Display suitable techniques in mathematical computation and data analysis using python programming. (P3, PLO3)

CLO 2 : Perform the use of digital application in deploying appropriate Python program in data management application. (P4, PLO6)

CLO 3 : Demonstrate professional ethics in the process of implementing the essential tools of data management using Python. (A3, PLO11)

06 DFD40172 BUSINESS INTELLIGENCE

Course Learning Outcome

CLO 1 : Discover the Business Intelligence and fundamental concepts of data manipulation to support decision making. (C2, PLO2)

CLO 2 : Construct fundamentals concepts of Business Intelligence using analytical processing tools. (P3, PLO3)

Synopsis

BUSINESS INTELLIGENCE course is designed to emphasize the specific technologies classifications for collecting, storing, analyzing and giving the best option for enterprise users to make better decisions. It consists of Data Warehousing, Decision Support System, OLAP and OLTP that are useful in helping human being to get the best decision for their business.

Track DATA

Synopsis & Course Learning Outcomes

Data Management & Visualization

07 DFS40283 SERVER ADMINISTRATION

Synopsis

SERVER ADMINSTRATION course is designed to provide a comprehensive understanding of both Linux and Windows server operating systems. Throughout this course, students will gain hands-on experience and practical knowledge in administering, configuring, and maintaining Linux and Windows Server. The course aims to develop a solid foundation in server administration skills, ensuring that learners can effectively manage a wide range of server environments.

Course Learning Outcome

CLO 1 : Construct various graphical and command line in Window Server and Linux utilities to ensure the proper operation of the system. (P3, PLO3)

CLO 2 : Perform different types of services using Windows Server and Linux. (P4, PLO6)

CLO 3 : Demonstrate good ethical practices when performing various autonomous functions for system server. (A3, PLO11)

08 INTRODUCTION TO MACHINE LEARNING

Course Learning Outcome

CLO 1 : Prepare learning models using relevant machine learning technique to solve real-world machine learning projects. (P2, PLO3)

CLO 2 : Demonstrate effective interpersonal communication in collaborative machine learning teams to propose findings and recommendations for enhanced project success. (A3, PLO4)

CLO 3 : Practice ethical decision-making in machine learning, addressing data privacy, bias, and fairness issues in professional applications. (A4, PLO11)

Synopsis

INTRODUCTION TO MACHINE LEARNING provides knowledge and skills in implementing MachineLearning tools and techniques for batch processing and prediction on the outcome of problems based on the previous learning. The course will cover two types of Machine Learningmethods (supervised and unsupervised learning)and how it can be used for batch processing using existing tools and libraries.

Synopsis & Course Learning Outcomes

Track DATA
Data Management & Visualization

09 DFD50223 DATA VISUALIZATION

Synopsis

DATA VISUALIZATION course will help students to explore different types of data analysis and visualization process. Basic process such as data exploration, data visualization model, high dimensional visualization and graphical exploration on business data will be covered in this course. Student will be able to analyse data and make visualization of the results using appropriate tools.

Course Learning Outcome

CLO 1 : Display the understanding of data visualization design principles in presenting data using appropriate tools. (P3, PLO3)

CLO 2 : Demonstrate effective communication skills to prepare and present data visually based on business dataset. (A3, PLO5)

CLO 3 : Demonstrate entrepreneur skills to visualize business dataset problemusing suitable available tools. (A3, PLO10)

10 DFD50233 WEB ANALYTICS

Course Learning Outcome

CLO 1 : Measure web traffic and usage patternusing web analytics tools for business decision making. (P3, PLO3)

CLO 2 : Demonstrate strong proficiency in accountability when analyzing the behavior of web visitors. (A3, PLO8)

CLO 3 : Practice ethical standards in visualizing website traffic for reporting purposes in a professional manner. (A2, PLO11)

Synopsis

WEB ANALYTICS is the process of gathering, analysing, and interpreting data regarding a website's utilisation and visitors' behaviour. The course will introduce the students to the web analytical processes, which involve monitoring and measuring various metrics and statistics to understand better how individuals interact with a website. This course identifies appropriate analytical techniques based on organisational and user goals by using the website data to determine the success or failure of those goals and to drive strategy and improve the user's experience. Students possess the capability to utilise theseanalytical skills to assist businesses in making well-informed decisions aimed at enhancing their online visibility, improving user experiences, and enhancing overall performance.

Synopsis & Course Learning Outcomes

COMPULSORY COURSES

01 MPU22053 ENGLISH FOR DIGITAL TECHNOLOGY

Synopsis

ENGLISH FOR DIGITAL TECHNOLOGY emphasises the skills required at the workplace to describe products or services as well as processes or procedures related to Digital Technology. This course will also enable students to make and reply to enquiries and complaints related to the field of Digital Technology.

Course Learning Outcome

CLO 1 : Describe products and services related to Digital Technology effectively through presentations by highlighting its features and characteristics that appeal to specific audience. (A3, PLO4)

CLO 2 : Demonstrate effective communication and social skills in handling enquiries and complaints related to Digital Technology amicably and professionally. (A3, PLO4)

02 MPU23032 PENGAJIAN ISLAM

Synopsis

PENGAJIAN ISLAM disediakan untuk melahirkan warganegara yang faham tasawwur (konsep) Islam sebagai satu cara hidup yang bersepadu dan seimbang serta berupaya menghadapi pelbagai masalah dan cabaran. Perbincangan berasaskan kepada konsep-konsep asas Islam, Islam sebagai cara hidup, institusi Islam dan cabaran semasa

Course Learning Outcome

CLO 1 : Melaksanakan dengan yakin amalan Islam dalam kehidupan seharian. (A2, PLO4)

CLO 2 : Menerangkanetika dan profesionalisme berkaitan Syariah dan Institusi Islam dalam membentuk pembangunan ummah. (A3, PLO11)

CLO 3 : Menghubungkait minda ingin tahu dengan Islam dan cabaran semasa di Malaysia. (A3, PLO8)

Synopsis & Course Learning Outcomes

COMPULSORY COURSES

03 MPU23272 PENDIDIKAN MORAL

Synopsis

PENDIDIKAN MORAL memberi pengetahuan tentang konsep asas moral untuk diamalkan. Selain itu, kursus ini juga menjelaskan etika individu yang bermoral dan bertanggungjawab serta isu-isu moral yang mempengaruhi pembentukan negara dan masyarakat

Course Learning Outcome

CLO 1 : Mengamalkan nilai moral yang baik dalam kehidupan seharian. (A2, PLO4)

CLO 2 : Menjelaskan etika dan profesionalisme individu yang bermoral dan bertanggungjawab terhadap negara. (A3, PLO11)

CLO 3 : Menghubungkait minda ingin tahu terhadap isu dan cabaran dalam membentuk negara dan masyarakat. (A4, PLO8)

Course Learning Outcome

CLO 1 : Membentangkan konsep etika dan peradaban dalam kepelbagaian tamadun. (A2, PLO4)

CLO 2 : Menerangkan proses pemerkasaan kesepaduan sosial merentasbangsa di Malaysia. (A2, PLO11)

CLO 3 : Mencadangkan sikap yang positif terhadapisu dan cabaran kontemporari dari perspektif etika dan peradaban. (A3, PLO8)

04 MPU21072 PENGHAYATAN ETIKA DAN PERADABAN

Synopsis

PENGHAYATAN ETIKA DAN PERADABAN ini menjelaskan tentang konsep etika daripada perspektif peradaban yang berbeza. Ia bertujuan bagi mengenal pasti sistem, tahap perkembangan, kemajuan dan kebudayaan merentas bangsa dalam mengukuhkan kesepaduan sosial. Selain itu, perbincangan dan perbahasan berkaitan isu-isu kontemporari dalam aspek ekonomi, politik, sosial, budaya dan alam sek:itar daripada perspektif etika dan peradaban dapat melahirkan pelajar yang bermoral dan profesional. Penerapan amalan pendidikanberimpak tinggi (HIEPs) yang bersesuaian digunakan dalam penyampaian kursus ini.

Synopsis & Course Learning Outcomes

COMPULSORY COURSES

05 MPU22071 KURSUS INTEGRITI DAN ANTIRASUAH

Synopsis

KURSUS INTEGRITI DAN ANTIRASUAH (KIAR) merangkumi konsep asas tentang nilai integriti, bentuk perbuatan rasuah, dan salah guna kuasa dalam kehidupan seharian serta dalam organisasi serta langkah-langkah pencegahan rasuah.

Course Learning Outcome

CLO 1 : Membincangkan hubungan nilai integriti dan antirasuah dengan isu semasa. (A2, PLO11)

CLO 2 : Menilai bentuk pelakuan rasuah dan salah guna kuasa dalam aktiviti seharian dan organisasi. (A3, PLO8)



Synopsis & Course Learning Outcomes

COMPULSORY

Co-Curriculum

NO	SEMESTER	SUBJECT CODE	SUBJECT NAME
1.	SEMESTER 1	MPU24031	SUKAN 1
2.	SEMESTER 1	MPU24041	KELAB/PERSATUAN 1
3.	SEMESTER 1	MPU24111	ASKAR WATANIAH 1
4.	SEMESTER 1	MPU24121	PLASTLDM 1
5.	SEMESTER 1	MPU24151	PISPA
6.	SEMESTER 1	MPU24161	PENGAKAP KELANA 1
7.	SEMESTER 1	MPU24171	PENGAKAP KELANA LAUT 1
8.	SEMESTER 1	MPU24181	PENGAKAP KELANA UDARA 1
9.	SEMESTER 1	MPU24191	RELASIS 1
10.	SEMESETR 1	MPU24201	PANDU PUTERI 1
11.	SEMESTER 1	MPU24211	BRIGED BOMBA 1
12.	SEMESTER 2	MPU24051	SUKAN 2
13.	SEMESTER 2	MPU24061	KELAB/PERSATUAN 2
14.	SEMESTER 2	MPU24221	ASKAR WATANIAH 2
15.	SEMESTER 2	MPU24231	PLASTLDM 2
16.	SEMESTER 2	MPU24261	PISPA 2

Synopsis & Course Learning Outcomes

COMPULSORY
Co-Curriculum

NO	SEMESTER	SUBJECT CODE	SUBJECT NAME
17.	SEMESTER 2	MPU24271	PENGAKAP KELANA 2
18.	SEMESTER 2	MPU24281	PENGAKAP KELANA LAUT 2
19.	SEMESTER 2	MPU24291	PENGAKAP KELANA UDARA 2
20.	SEMESTER 2	MPU24301	RELASIS 2
21.	SEMESTER 2	MPU24311	PANDU PUTERI 2
22.	SEMESTER 2	MPU24321	BRIGED BOMBA 2



Synopsis & Course Learning Outcomes

PROJECT

01 DFT50194 INTEGRATED PROJECT TRACK: SAD, NS, IS, DATA, WEB

Synopsis

INTEGRATED PROJECT course will give students the practical and design experience of carrying out an independent application softwareor technical projectfrom project requirements, implementation, testing to delivery and presentation of the project. The course requires students to learn new technologies and encourages students to develop their generic skillssuch as developing teamwork, project management, communication skills, problem solving skills and technical writing skills. This will inculcate independent and life-long learning.

Course Learning Outcome

CLO 1 : Construct an end productto be used in the project's maintenance and future expansion. (P4, PLO3)

CLO 2 : Demonstrate a high level of communication, interaction and proficiency to achieve a productive project. (A3, PLO5)

CLO 3 : Perform leadership and team management skills effectively to manage issues in project development. (A2, PLO8)

CLO 4 : Relate professional career goals in project development that lead to local or region mass communities building. (A4, PLO9)

02 DFG50534 PROJECT TRACK: GAME

Synopsis

PROJECT is designed to encourage student to apply knowledgeand skill acquiredfrom the variouscourses into their games programming development process. Students are required to deliver the task at different stages of the process. This course contains the fundamentals of games engineering as well as the feasibility of game project. This course trains the student to be self-initiated learner who are able to adapt and adopt new knowledge and technologies to be applied in their project.This course also encourages studentto develop their generic skills such as communication skills, problem solving skills, teamwork,project management and academic writing skills.

Course Learning Outcome

CLO 1 : Build an application using suitable softwareto test the playbility and functionality of the application. (P4, PLO3)

CLO 2 : Adhere to professionalism and positive values to meet the need of organization. (A4, PLO8)

CLO 3 : Present the ideas of project in promoting marketable end product. (A2, PLO10)

CLO 4 : Adhere to steadfast professionalism throughout the development of the application project. (A4, PLO11)

INDUSTRIAL TRANING

Synopsis & Course Learning Outcomes

DUT60019 INDUSTRIAL TRAINING

Synopsis

INTEGRATED PROJECT course will give students the practical and design experience of carrying out an independent application softwareor technical projectfrom project requirements, implementation, testing to delivery and presentation of the project. The course requires students to learn new technologies and encourages students to develop their generic skillssuch as developing teamwork, project management, communication skills, problem solving skills and technical writing skills. This will inculcate independent and life-long learning.

Course Learning Outcome

CLO 1: Perform duties in accordance with job requirements at the workplace. (P4, PLO3)

CLO 2: Display effective communication and social skills at the workplace. (A3, PLO4)

CLO 3: Integrate values, attitudes and professionalism effectively at the workplace. (A4, PLO11)

CLO 4: Develop responsibility of leadership and teamwork at the workplace. (A4, PLO6)

CLO 5: Organize information management appropriately at the workplace. (P4, PLO5)

CLO 6: Integrate lifelong learning skills and entrepreneurial mind at the workplace. (A4, PLO10)

Assessments



General Guide

During Teaching & Learning:

- The achievement of the learning outcomes should use the combination of the various assessment methods either summative or formative assessments.
- Knowledge and understanding should be tested through written, oral or other suitable assessments.
- Practical skills should be tested by practical evaluation such as lab test;
- In courses requiring practical skills, pass in practical evaluation is compulsory. A pass here implies that the examiner is satisfied that the candidate has demonstrated the ability to perform required practical skills.

Assessment Methods

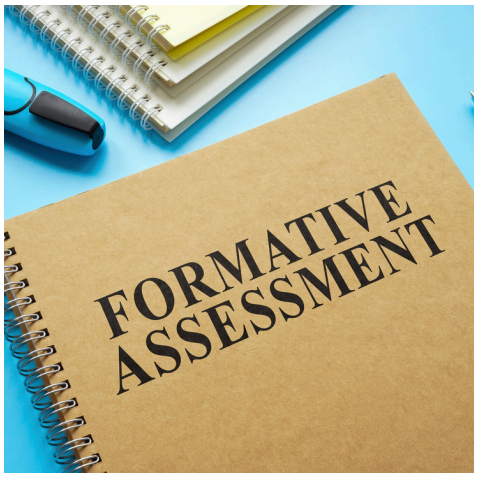
The course assessment is carried out in TWO (2) sections:

1) Formative Assessment (Continuous Assessment - CA)

Given throughout the learning process. Formative assessment is a process of monitoring the achievement of the learning outcomes of students at a periodic time. This is also referred to as continuous assessment.

2) Summative Assessment (Final Assessment - FA)

Given at the end of course or semester. Summative assessment a process of evaluating and grading the learning of students at the end of a module. This is also referred to as final assessment. This assessment can be in the form of written examination, oral examination, skill assessment or presentation.





Terms and Condition

Candidates should **pass BOTH formative (continuous) and summative (final)** assessment for every subject. Pass should imply that the examiner must be satisfied that the candidate has met all the learning outcomes of the particular subject.

Grading System



The marks obtained by students in a course will be given points and grades according to the following groups:

Marks	Grade Point	Grade	Status
90 - 100	4.00	A+	Outstanding
80 - 89	4.00	A	Excellent
75 - 79	3.67	A-	Credit
70 - 74	3.33	B+	Credit
65 - 69	3.00	B	Credit
60 - 64	2.67	B-	Pass
55 - 59	2.33	C+	Pass
50 - 54	2.00	C	Pass
47 - 49	1.67	C-	Pass
44 - 46	1.33	D+	Pass
40 - 43	1.00	D	Pass
30 - 39	0.67	E	Fail
20 - 29	0.33	E-	Fail
0 - 19	0	0	Fail

KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI



ADDRESS OF POLYTECHNICS WITH DIT PROGRAMME

Politeknik Ungku Omar (PUO)
Jalan Raja Musa Mahadi
31400 Ipoh
Perak

05-5457622
https://www.puo.edu.my



Politeknik Sultan Abdul Halim Mu'adzam Shah (POLIMAS)
Bandar Darulaman
06000 Jitra
Kedah

04-914 6100/04-914 6200
https://polimas.mypolycc.edu.my/



Politeknik Kuching Sarawak (PKS)
Km 22 Jalan Matang
93050 Kuching
Sarawak

082-845596/7/8
http://www.poliku.edu.my



Politeknik Seberang Perai (PSP)
Jalan Permatang Pauh,
13500 Permatang Pauh
Pulau Pinang

04-5383322 samb. 5110/ 1008/ 1009
http://www.psp.edu.my



Politeknik Kuala Terengganu (PKT)
Jalan Sultan Ismail,
20200 Kuala Terengganu
Terengganu

09-632 2000 / 2055 / 2023 / 2022
http://www.pkt.edu.my



Politeknik Sultan Mizan Zainal Abidin (PSMZA)
Km 8, Jalan Paka,
23000 Dungun
Terengganu

09-8400800 / 0996 / 0901 / 0988
https://psmza.mypolycc.edu.my



Politeknik Sultan Idris Shah (PSIS)
Sungai Lang,
45100 Sungai Air Tawar
Selangor Darul Ehsan

03-32806255 / 6256 / 6257 / 6258 / 6266

https://psis.mypolycc.edu.my/



Politeknik Tuanku Syed Sirajuddin (PTSS)
Pauh Putra,
02600 Arau
Perlis

04-988 6200
https://www.ptss.edu.my/



Politeknik Muadzam Shah (PMS)
Lebuhraya Tun Abdul Razak,
26700 Muadzam Shah
Pahang

09-4502007
https://pms.mypolycc.edu.my/



Politeknik Mukah Sarawak (PMU)
Km7.5 Jalan Oya
96400 Mukah
Sarawak

084-874001 sambungan 8015 / 8014
http://www.pmu.edu.my



Politeknik Balik Pulau (PBU)
Pinang Nirai Mukim 6,
11000 Balik Pulau
Pulau Pinang

04-868 9000
https://pbu.mypolycc.edu.my/



Politeknik Mersing (PMJ)
Jalan Nitar,
86800 Mersing
Johor

010-3052527
https://pmj.mypolycc.edu.my/web/



Politeknik METrO Kuala Lumpur (PMKL)
No. 2-14, Jalan Setiawangsa 10,
Taman Setiawangsa,
54200
Kuala Lumpur

03-4251 4631 / 03-4251 8000
https://pmkl.mypolycc.edu.my/



Politeknik METrO Tasek Gelugor (PMTG)
No.25, Jalan Komersial 2,
Pusat Komersial Tasek Gelugor,
13300 Tasek Gelugor
Pulau Pinang

04-5732789
http://www.pmtg.edu.my



Politeknik Besut Terengganu (PBT)
Jalan Bukit Keluang
22200 Besut
Terengganu

09-6922999
https://polibesut.mypolycc.edu.my



JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI (JPPKK)

Aras 4-7, Galeria PJH, Jalan P4 W,
Persiaran Perdana,
62100 Putrajaya

03-8888 3837
03-8888 2111
https://www.mypolycc.edu.my/





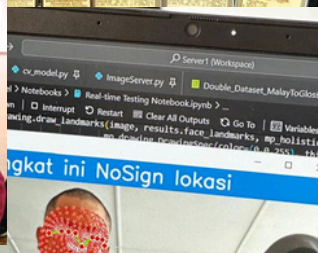

POLITEKNIK
MALAYSIA






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TECHNOLOGY
INNOVATION
COMPETITION

KELUAR


KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

POLITEKNIK MALAYSIA

9 786297 635507

DIT: Diploma in Information Technology
Student Handbook
2024